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ABSTRACT

The purpose of this study was to develop a valid, reliable instrument for measuring the perceptions of teachers regarding decision-making structures and teacher involvement in decision-making in schools using the Individually Guided Education (IGE) model. Elements of Lipham's model of the decision-making process and Dale's definition of decentralized decision-making were incorporated into the instrument. The study consisted of three phases, including (1) the definition phase, (2) the instrument construction phase, and (3) the instrument testing phase. In the testing phase, the final instrument was administered to teachers in 77 randomly selected IGE elementary schools. Analysis of the survey data showed that IGE teachers desired greater involvement in decision-making at the schoolwide and extraschool levels, but they felt they already had moderately high involvement in decision-making at the unit-subunit level within their schools. The testing phase proved the final instrument to be a valid and reliable means of measuring teacher perceptions of real and ideal decision-making in IGE elementary schools. (Author/JG)

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Technical Report No. 374

REAL AND IDEAL DECISION STRUCTURE AND INVOLVEMENT IN IGE SCHOOLS

by

Kenneth W. Wright

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Report from the Project on
Organization for Instruction and
Administrative Arrangements

Wisconsin Research and Development
Center for Cognitive Learning
The University of Wisconsin
Madison, Wisconsin

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ABSTRACT

The purpose of this study was to develop valid and reliable instrumentation to measure the perceptions of teachers regarding the structures for making decisions and the level of involvement of teachers in making potent decisions in IGE schools.

The theoretical framework for the study was decision theory. Elements of Lipham's model of the decision-making process and of Dale's definition of decentralization of decision making were incorporated into the instrument. In contrast to previous research on decision theory, this study attempted to ground the theoretical framework in observed and reported phenomena as well as to examine relationships with other constructs.

The study was conducted in three phases: 1) the definition phase; 2) the instrument construction phase; and 3) the instrument testing phase. In the definition phase, the domains of decision content, decision structures, and the decision-making process in IGE schools were defined. Data were collected from three sources. First, participants at one national and two regional IGE conferences were interviewed and asked to respond to a questionnaire. Second, interviews were conducted with teachers, unit leaders and principals in nine exemplary IGE schools, three each from California, New Jersey, and South Carolina. Third, the IGE literature was reviewed for additional items in each domain.

In the instrument construction phase, a panel of experts rated the potency of the decision content items and the most potent items

were included in the pilot version of the instrument. The response format regarding decision structures and involvement in the decision-making process were tested in four IGE elementary schools in Wisconsin and refined for the pilot version. The instrument was piloted in five of the nine schools involved in the interviews of the definition phase. Factor analysis and tests for internal consistency were utilized to determine the subscales and the reliability of the pilot version instrument. The pilot version instrument was refined into the final version to be tested.

In the instrument testing phase, the final version instrument was administered in 77 randomly selected IGE elementary schools in 13 states. Seventy-seven of the schools returned useable data.

The major findings of the study were as follows:

1. IGE teachers perceived themselves to have moderately high involvement in making potent decisions of unit-subunit scope, some involvement in making potent decisions of schoolwide scope and little involvement in making potent decisions of extra-school scope.

2. IGE teachers desired greater involvement in making potent decisions, especially in decisions of schoolwide and extra-school scope.

3. The IIC and the SPC were not functioning widely as decision-making structures.

4. The I and R Unit was functioning as a decision-making structure for decisions of unit-subunit scope in the majority of IGE Schools.

5. IGE principals were perceived as making more potent decisions presently than was ideal.

6. There was a significant negative relationship between the perceived level of involvement of teachers in the decision-making process and the perceived effectiveness of I and R Unit operations. The negative correlations were minimal, however.

7. The instrument constructed in this study provided a valid and reliable means to measure perceptions of the real and ideal decision structures utilized in and the real and ideal levels of involvement of teachers in the decision-making process in IGE elementary schools.

CHAPTER I

BACKGROUND OF THE STUDY

This chapter begins with an examination of decision theory, the theoretical framework for the study. Next, decision making in IGE/MUS-P is considered. Then, the problem investigated in the study is stated. The chapter concludes with a definition of terms that are basic to the study.

Decision Theory

The theoretical framework for this study was decision theory. Although much has been written about decision making, it must be viewed as an underdeveloped theory. Several factors contribute to this immaturity. First, decision making is a complex phenomenon involving a milieu of situational, organizational, and personal variables. Out of such complexity, it is difficult to develop parsimonious models that adequately account for the variations observed in decision behavior. Second, the theory has not developed from systematic phenomenological research, rather it has been intuited.[1] Although significant scientific theories often stem from intuited creative leaps,[2] at some point a theory

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[1]Phi Delta Kappa National Study Committee on Evaluation, Educational Evaluation and Decision Making (Itasca, IL: F. E. Peacock, 1971), p. 331.

[2]Thomas S. Kuhn, The Structure of Scientific Revolutions (Chicago: University of Chicago Press, 1962).

must be grounded in the phenomenon it explains. The extent to which observed events are represented by various decision models has not been tested empirically. Third, even in the mathematical decision models, it has been difficult to measure the most significant elements of the decision-making process. Consequently, few attempts have been made to verify hypothesized relationships. Decision theory is still in the model building phase and, to mature, requires both phenomenological and verificational research.

As would be expected in an immature theoretical area, most of the literature either has been written to delineate the significant elements of decision making or to prescribe application of decision-making concepts in administrative practice. Numerous authors have noted the importance of decision making in administration. As early as 1938, Barnard[3] stated, "The essential process of adaptation in organizations is decision. . . ." McCamy[4] described decision making as "the core of administration, all the other attributes of the administrative process being dependent on, interwoven with, and existent for the making of decisions." Simon,[5] also maintaining decision making as central to administration,

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[3]Chester I. Barnard, The Functions of the Executive, (Cambridge, MA: Harvard University Press, 1938), p. 286.

[4]James L. McCamy, "Analysis of the Process of Decision-Making," Public Administration Review, 7 (Winter, 1947), 41.

[5]Herbert A. Simon, Administrative Behavior, 2nd ed. (New York: Free Press, 1966), p. 1.

wrote, "A general theory of administration must include principles of organization that will insure correct decision making, just as it must include principles that will ensure effective action." Similarly, Gregg[6] perceived decision making as "the very heart of the administrative process," and noted further that in educational administration, "the community as a whole, the board of education, the superintendent, principals, teachers, nonprofessional workers, and even the pupils, both individually and collectively, make decisions which have import for the school system."

Prior to the mid-1960's, authors generally perceived decision making from either of two perspectives: decision making as a central process of administration or decision making as a function of an organization's structure. Most of the early work utilizing the process perspective examined only those events preceding and including the act of choice itself. McCamy's[7] definition had such an emphasis:

> Decision making is defined here as the complex human associations, events, and words leading to, and including, any conclusion for a program of policy or operations. . . . It is the process of people acting upon each other toward a conclusion.

Although limited in their examination of decisions to the events prior to and including the act of choice, the early authors recognized

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[6]Russell T. Gregg, "The Administrative Process," in Roald F. Campbell and Russell T. Gregg, eds., Administrative Behavior in Education (New York: Harper and Row, 1957), p. 275.

[7]James L. McCamy, op. cit., p. 41.

the complexity of the process. Barnard[8] stated that physical, biological, social and personal factors of a situation influence the decision maker. Tannebaum[9] noted several limits effecting the final decision, including the definition of purpose, criterion of rationality, conditions of employment, amount of information available, time limits and lines of authority. McCamy[10] identified five personal factors and seven ex-personal factors, or factors concerning primarily the organization rather than the individual decision maker, which influenced the decision process:

Personal Factors

1. The prestige of the individual in relation to others involved and in relation to his total environment.
2. The economic security of the individual in relation to others involved and especially in relation to those for whom he feels affectionate responsibility, e.g., wife, children, parents.
3. The individual's knowledge as applied in the particular consideration.
4. The responsibility to the public or to groups which the individual feels according to his character and his ideological and moral predilection.
5. The complex of attitudes concerning competence and personality which the individual holds toward others in his grouping.

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[8]Chester I. Barnard, op. cit., p. 286.

[9]Robert Tannebaum, "Managerial Decision-making," Journal of Business (January, 1950), 33-37.

[10]James L. McCamy, op. cit., 44-46.

Ex-Personal Factors

1. Events in the field of the agency's work.
2. Knowledge from research and analysis.
3. The expectations of individuals or groups to whom decision makers are responsible.
4. The reputation of the agency.
5. The security of the agency.
6. The resources available.
7. The legal conditions which affect the decision.

Griffiths,[11] in his consolidation of the complex aspects of the decision process identified by earlier works into an initial statement of a general theory of decision making in educational organizations, extended the concept of decision making beyond the act of choice to the implementation of the choice. Griffiths contended that the decision process follows a six-step, problem-solving mode: 1) define the problem, 2) analyze the problem; 3) establish criteria of solution; 4) collect information; 5) formulate alternatives; and 6) carry out the alternative chosen. Simon[12] also extended the scope of decision theory through his contention that decision making went far beyond the formation of policy. He viewed the decision process as interdependent with, yet separate from, action:

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[11]Daniel E. Griffiths, op. cit., pp. 132-33.

[12]Herbert A. Simon, op. cit., p. 1

> . . . the process of decision does not come to an end when the general purpose of an organization has been determined. The task of "deciding" pervades the entire administrative organization quite as much as does the task of "doing"--indeed, it is integrally tied up with the latter.

Dill[13] eliminated any dichotomy between a process of choice and a process of action in his four-stage conceptualization of the decision process. In fact, none of his descriptors of the four stages even connotes choice: 1) agenda building; 2) search; 3) implementation; and 4) evaluation. Dill, in effect, collapsed the six steps of Griffiths' model into three stages, and importantly, added evaluation, a state in which the results of previous commitments and actions are examined in order to identify new tasks to be included on the agenda and help the organization make decisions more effectively. Thus, to Dill, the decision process was cyclical, continuous and included the task of "doing."

Authors of the second predominant decision perspective, the organizational decision structure, have been concerned primarily with the locus of decisions. Barnard's[14] typology of decisions, later named by Griffiths[15] as intermediary, appellate, and creative decisions, categorized decisions according to their source within the organization and the required

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[13]William R. Dill, "Decision Making," in Daniel E. Griffiths, ed., Behavioral Science and Educational Administration (Chicago: University of Chicago Press, 1969), p. 201.

[14]Chester I. Barnard, op. cit., p. 115.

[15]Daniel E. Griffiths, "Administration as Decision-making," in Andrew W. Halpen, ed., Administrative Theory in Education (Chicago: Midwest Administration Center, 1958), p. 144.

accompanying action. Fayol[16] viewed the locus of decisions as a continuum, with decentralization and increased importance of subordinates at one end and centralization and reduced importance of subordinates at the other. Several authors have noted that neither extreme of the continuum is a desired state. Albers[17] stated:

> Complete centralization is the concentration of all decision-making at the apex of the management hierarchy. If this were possible, there would be no need for an administrative hierarchy. Complete decentralization, or delegation of all decision-making functions to the lowest level of the hierarchy, is equally absurd. The logical consequence would be the elimination of all administrative positions above the lowest level.

Similary, Simon[18] noted: "It is not a question of wanting centralization or decentralization but rather a question of how much of it we want." Allen[19] posited that "Neither centralization nor decentralization should be allowed to go to completion; an equilibrium is always necessary."

Numerous studies of centralization have been conducted in a variety of non-educational organizations. In the work perhaps having the greatest

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[16]Henry Fayol, General and Industrial Management (London: Sir Isaac Pitman and Sons, 1949), p. 34.

[17]Henry H. Albers, Organized Executive Action (New York: John Wiley and Sons, 1961), p. 135.

[18]Herbert A. Simon, The New Science of Management Decisions (New York: Harper and Row, 1960), p. 43.

[19]Louis A. Allen, Management and Organization (New York: McGraw-Hill, 1958), p. 157.

impact on research in centralization, Hage[20] consolidated the findings of several centralization studies with findings of research on other organizational variables into an axiomatic theory of organizations. The theory focused on eight major propositions, three of which involved centralization:

I. The higher the centralization, the higher the production.

III. The higher the centralization, the higher the formalization.

VII. The higher the complexity, the lower the centralization.

Hage prescribed two measures of centralization, the first intended to be the stronger measure and the second accounting for exceptions: 1) the proportion of jobs that participate in decision making; and 2) the number of areas in which decisions are made by decision makers. Three studies specific to IGE which utilized measures of centralization as defined by Hage will be discussed subsequently in this chapter.

Hage's axiomatic theory has led to empirical research primarily because his model was quantifiable. His operational definition of centralization must be questioned, however. Hage equated centralization of decision making with the hierarchy of authority. The wider the range of the hierarchy involved in decision making and the higher the number of decision areas in which they participate, then the less centralized the organization. This limited view of both the decision process and of

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[20]Jerald Hage, "An Axiomatic Theory of Organizations," Administrative Science Quarterly, 10 (December, 1965), 289-320.

centralization ignores such attributes of decision making as potency of decision content, scope of decision content, length of involvement, degree of involvement, and differentiated involvement in consecutive stages of the decision process.

A hypothetical example from education impresses the limitations of Hage's conception of centralization. An examination of two school districts indicated that in the first school paraprofessionals, teachers and the principal were involved over a month's time in over forty-five decisions in five major decision categories: student personnel, staff personnel, physical and financial resources, curriculum, and home-school-community relations. In the second school, the paraprofessionals and teachers were involved in the same month in only three decisions--two regarding curriculum and one regarding staff personnel. The remainder of the decisions either were not made or were made at higher levels of the hierarchy. According to Hage's definition, the second school was more centralized than the first.

An analysis of the nature of involvement and the content of the decisions made, however, determined that of the forty-five decisions in which the staff of the first school participated, all were of low importance--individual decisions such as the pages to be covered by a student in reading and the number of pencils, pens and paper each teacher is to be allocated. In the second school, the three decisions were of high importance--adopting a new reading curriculum, attempting cross-age grouping of students, and selecting a new principal. Furthermore, in the first school, the paraprofessionals and teachers were involved in the

decision process only by expressing their feelings to the principal who then recommended a decision on most issues to personnel further up the hierarchy. In the second school, the paraprofessionals and teachers had two representatives with votes on a systemwide program recommending committee. Obviously, the lower levels of the hierarchy had more involvement in deciding important issues in the second school than in the first. It can be seen that Hage's conceptualization of centralization of decision making is oversimplified.

In an earlier work, Dale[21] provided a more adequate conceptualization of centralization than offered in Hage's axiomatic theory. Dale, suggesting four criteria to determine the nature and extent of decentralization, stated that in comparing two organizations, the more decentralized structure will have:

1. A greater number of decisions made lower down the management hierarchy.

2. More important decisions made lower down the management hierarchy.

3. More functions affected by decisions made at lower levels.

4. Less checking required on the decision. Decentralization is greatest when no check at all must be made; less when superiors have to be informed of the decision after it has been made; still less if superiors have to be consulted before the decision is made. The fewer people to be consulted, and the lower they are on the management hierarchy, the greater the degree of decentralization.

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[21]Ernest Dale, Planning and Developing the Company Organization Structure, Research Report Number 20 (New York: American Management Association, 1952), p. 107.

For ease of discussion, Dale's four criteria will be referred to as 1) frequency, 2) potency, 3) scope, and 4) hierarchical involvement.

Dale's four criteria were largely ignored until utilized in a series of studies conducted in coordination with a study by Eye, Lipham, Gregg, Netzer and Francke,[22] concerning the locus of administrative decisions. A decision point analysis instrument was developed for the major study, as well as for companion studies by Fogarty,[23] Reinke,[24] Tornow[25], Francke,[26] and Duffy.[27] The instrument combined measures of Dale's frequency, scope, and hierarchical involvement with the four-level

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[22]Glen G. Eye, et al., "Relationship Between Instructional Change and the Extent to Which School Administrators and Teachers Agree on the Location of Responsibilities for Administrative Decisions," (Madison: University of Wisconsin Cooperative Research Program of Health, Education, and Welfare Research Project No. 5-0433 [1913], 1966).

[23]Bryce M. Fogarty, "Characteristics of Superintendents of Schools and Centralization-Decentralization of Decision Making," unpublished doctoral dissertation, University of Wisconsin, 1964.

[24]Kenneth H. Reinke, "Authority Structure and Decision Making in School Systems," unpublished doctoral dissertation, University of Wisconsin, 1964.

[25]Eugene W. Tornow, "A Study of the Relationship of Teachers' Perceptions of Decision Points and the Interactions of the Superintendents of Schools, the Director of Instruction and the High School Principal," unpublished doctoral dissertation, University of Wisconsin, 1965.

[26]Donald C. Francke, "Perceptual Accuracy and Personal Variables," unpublished doctoral dissertation, University of Wisconsin, 1965.

[27]Emmet James Duffy, "The Role of Director of Instruction--Tasks, Interactions, and Processes," unpublished doctoral dissertation, University of Wisconsin, 1965.

description of typical school district's administrative hierarchy described by Knezevich:[28] 1) general administration; 2) central administration; 3) building administration; and 4) classroom administration.

The Decision Point Analysis Instrument allowed researchers to measure decentralization of decision making in educational organizations. The instrument had two shortcomings, however. First, the decisions included on the instrument were not gathered from systematic field observations or interviews; instead, the validity of the decision content items was established by a panel of experts.

Second, the instrument utilized an ordinal scale which suffered two limitations. First, a four-point scale was utilized, with involvement represented by: one, "Make the decision;" two, "Recommend the preferred decision;" three, "Provide information only;" and four, "None." These categories did not include such types of involvement as identifying problems or evaluating results. Also, the categories did not necessarily represent an ascending order of involvement. As O'Shaughnessy[29] pointed out, the most influential involvement in the decision process may be defining the problem, providing information, or creating alternatives rather than the act of decision itself. The final decision may be limited

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[28]Stephen J. Knezevich, Administration of Public Education, 2nd ed. (New York: Harper and Row, 1974), p. 41.

[29]John O'Shaughnessy, Inquiry and Decision (London: George Allen and Unwin, 1972).

and controlled by all the previous steps as well as the steps of implementation and evaluation. The Decision Point Analysis Instrument was useful in locating the hierarchical position perceived responsible for making the final decision, its major purpose. It was inadequate, however, for measuring involvement in the decision-making process.

The earlier works in the organizational structure perspective, unlike the process perspective, led to empirical analysis. The initial research on centralization, however, either was based on inadequate conceptualizations of decision making or utilized inadequate instrumentation.

Recent work has expanded, synthesized, and refined decision theory. As was true of the earlier writing on decision processes, however, recent writings have not been verified by empirical research. Braybrooke and Lindbolm's[30] typology of decision making serves as a prime example. They introduced a four-square matrix of decision settings, the two axes being the scope of the change involved and the decision makers' grasp of information relevant to the decision. In two of the four quadrants in the matrix, however, the authors found no decision process to be appropriate. In the two remaining quadrants, synoptic decision making was relegated to insignificant decisions in which the correct decision is obvious from the information available. This left the authors' "disjointed" incrementalism" as the decision process most appropriate for the majority

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[30]David Braybrooke and Charles E Lindbolm, A Strategy of Decision (New York: Free Press, 1963), p. 78.

of real world decisions. The authors built a matrix of decision-making situations with matching decision strategies. Once constructed, however, the authors in effect dismantled the matrix leaving only one of the four quadrants as a reasonable method of solving problems. What began as a system to describe decision strategies became an intuited argument for one decision strategy.

The decision-setting typology next was applied to educational decisions by the Phi Delta Kappa National Study Committee on Evaluation.[31] The four quadrants were named Metamorphism, for high understanding--large change, Homeostasis, for high understanding--small change, Incrementalism, for low understanding--small change, and Neomobilism, for low understanding--large change. Recognizing the non-existence of the metamorphic quadrant in education, the committee only dealt with the other three quadrants. Different decision strategies were offered as appropriate for each of the three decision settings: The synoptic ideal for homeostatic settings, disjointed incrementalism for incremental settings, and the planned change model, involving neomobilistic settings.

In addition, a decision typology was introduced with decisions classified into four categories according to whether they pertained to ends or means and whether they were relevant to intentions or actualities. A flow chart offering appropriate decision strategies for each type of decision in each decision setting was then offered as a guide to

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[31]Phi Delta Kappa National Study Committee on Evaluation, op. cit., pp. 51-79.

educational decision makers and evaluators. Once the guide was offered, however, the committee introduced serious questions about the validity of the decision strategies, decision typology, and decision setting matrix utilized. They concluded:

> The present formulations [including their own] do not offer . . . him [evaluators] much guidance, nor is he likely to get help from the professional literature on decision making. A better model, based on empirical information about real-world decision makers, is very much needed.[32]

Thus, typologies have been created, used to explain decision settings and develop appropriate decision strategies, destroyed and recreated, all without verifying the extent to which the conceptualized categories accurately represent real world events. Such conceptualizations should be tested.

Two other recent works have contributed untested conceptual refinements to decision theory. Alkin[33], in developing a theory of evaluation, reconceptualized evaluation in the decision process as consisting of two separate states: 1) providing progress information for program improvement during the implementation stage, and 2) providing summary information for program certification. Alkin also re-emphasized the cyclical nature of the decision process. O'Shaughnessy[34] identified the logical processes used in each stage of the decision process. He emphasized, first, that

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[32] Ibid., p. 334.

[33] Marvin C. Alkin, "Evaluation Theory Development," Evaluation Comment (Center for the Study of Evaluation, University of California, Los angeles), 2 (October, 1969), 9.

[34] John O'Shaughnessy, op. cit.

different types of information are needed for each stage and, second, that the manner in which problems are identified and explained greatly restricts the range of alternatives that will be developed.

In a recent work on decision theory, Lipham[35] synthesized many previously disjointed factors influencing the decision process into a consistent theoretical model. The model defined decision making within a systems context as:

> . . . a process wherein an awareness of a problematic state of a system, influenced by information and values, is reduced to competing alternatives, among which a choice is made, based upon perceived outcome states of the system.[36]

The model accounted for the complexity of the decision process, accommodating the rational and non-rational elements of the process as well as the major elements of the organizational structure and more recent evaluation perspectives. The model is presented in Figure 1.

Lipham also identified three dimensions useful in assessing an organization's decision process: decision content, decision behavior, and decision involvement. In other terms, the three dimensions accounted for what the decision is about, how the decision is made, and who is involved in the decision-making process. Although conceptually independent, the three dimensions are interactive, as depicted in Figure 2.

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[35]James M. Lipham and James A. Hoch, Jr., The Principalship: Foundation and Functions (New York: Harper and Row, 1974), pp. 148-174.

[36]Ibid., p. 155.

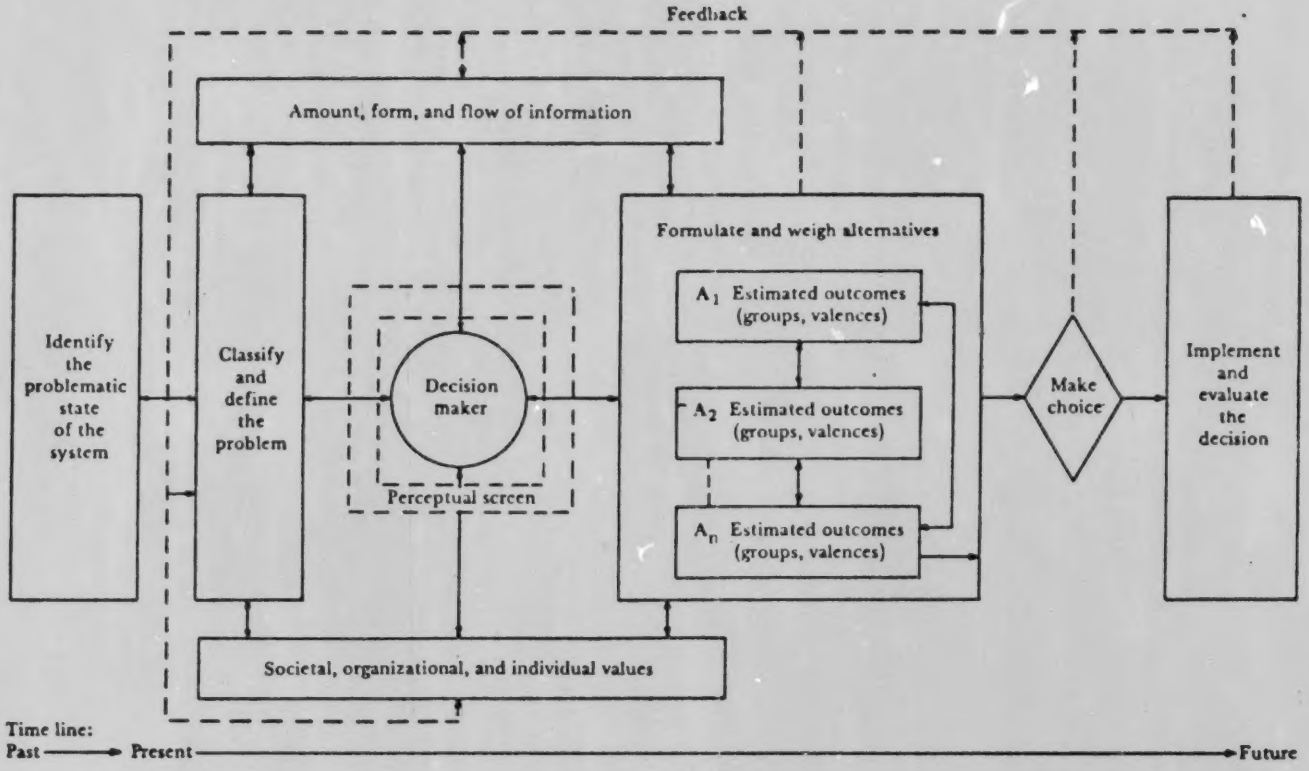

Figure 1. Model of the Decision Making Process

Source: James M. Lipham, "Improving the Decision-making Skills of the Principal," in Jack A. Culbertson, Curtis Henson, and Ruel Morrison, eds., Performance Objectives for School Principals (Berkely: McCutchan Publishing Corp. 1974), p. 88.

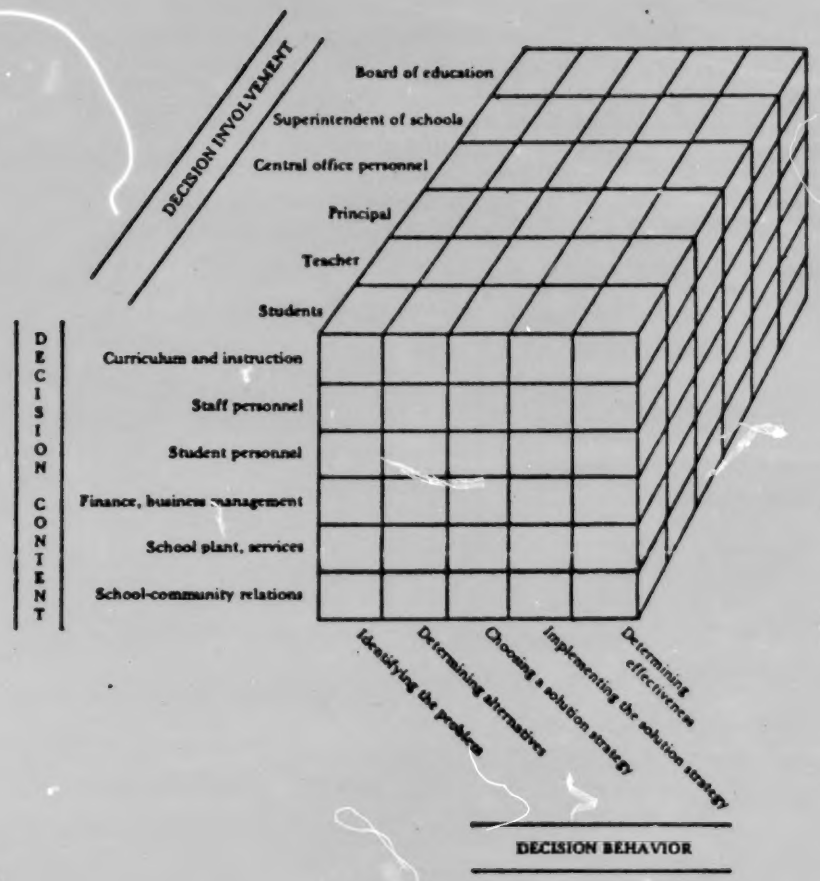

Figure 2. Three Basic Dimensions of Decision Making.

Source: Lipham, "Improving the Decision-making Skills of the Principal," p. 106.

Lipham's descriptions of the dimensions and the process of decision-making have accounted for the major elements previously identified in the literature as related to the decision process and the organizational decision structure. Consequently, these models were utilized to define decision making in this study.

In addition to the models, Lipham[37] described four modes available to utilize existing theory and research on decision making: the developmental mode, the assessment mode, the interactive mode, and the structural change mode. The developmental mode was especially pertinent to this study. Although designated as the initial research step of "building, designing, or adapting instrumentation concerning decision making" that is "unique to the problems, procedures or issues" in a specific school system, the developmental mode is also applicable to decision instrument development that is unique to the problems, procedures, or issues of a structured innovation, such as IGE.

Decision Making in IGE

One of the primary objectives for changing the structure of schools from the traditional age-graded, self-contained classroom to the multiunit organization was to change the pattern of involvement in the decision-making process. Through the formation of units, the Instructional Improvement Committee (IIC) and the Systemwide Program Committee (SPC), many important decisions which formerly were made autonomously by the

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[37]James M. Lipham, "Improving the Decision-Making Skills of the Principal," in Jack A. Culbertson, et al., eds., Performance Objectives for School Principals (Berkely, CA: McCutchan, 1974), pp. 105-109.

teacher, the principal, or the central office now were to be shared. Decisions were to be made as near the point of their implementation as possible.

The results of several studies indicated that decisions were more decentralized in schools adopting IGE than in non-IGE schools. Pellegrin[38] found that principals in IGE schools had less impact on decisions made by teachers than in traditional schools. Also, unit leaders were found to have significant influence on decisions in IGE schools in contrast to the principal's domination of decisions in traditional schools. The decentralization found by Pellegrin did not center around the IIC as may have been expected, however. The effectiveness of the IIC appeared to be minimal.

Hage's operational definition of centralization was utilized in three studies investigating structural elements of IGE. Walter,[39] in a study of the relationship of organizational structure to adaptiveness, found IGE schools had significantly lower centralization than non-IGE schools and that IGE schools were significantly more adaptive than non-

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[38]Roland J. Pellegrin, "Some Organizational Characteristics of Multiunit Schools," Working Paper No. 22, Wisconsin Research and Development Center for Cognitive Learning, Madison, University of Wisconsin, 1969.

[39]James Walter, "The Relationship of Organizational Structure to Adaptiveness in Elementary Schools," Technical Report No. 276, Wisconsin Research and Development Center for Cognitive Learning, Madison, University of Wisconsin, 1973.

IGE schools. Similarly, Herrick[40] found IGE schools significantly less centralized in decision making than non-IGE schools. In addition, Herrick found higher teacher motivation in schools having low centralization of decision making than in schools having high centralization. Gramenz[41] found the degree of centralization of decision making to be a significant predictor of unit effectiveness as perceived by unit leaders and unit teachers.

The role of the IIC as a decision-making structure in IGE has been investigated in three studies. Loose[42] found that 60 percent of the final decisions made by the IIC were of low importance. Smith[43] found significant positive relationships between the decision-making effectiveness of the IIC and: 1) the interrelationship of the chairman's Initiation of

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[40]H. Scott Herrick, "The Relationship of Organizational Structure to Teacher Motivation in Traditional and Multiunit Elementary Schools," unpublished Doctoral dissertation, University of Wisconsin, 1974.

[41]Gary W. Gramenz, "Relationship of Principal Leader Behavior and Organizational Structure of the IGE/MUS-E to I and R Unit Effectiveness," Technical Report No. 320, Wisconsin Research and Development Center for Cognitive Learning, Madison, University of Wisconsin, 1974.

[42]Caroline Loose, "Decision-making Patterns and Roles in the IIC," unpublished Doctoral dissertation, University of Wisconsin-Milwaukee, 1973.

[43]Kenneth Blaine Smith, "An Analysis of the Relationship Between Effectiveness of the Multiunit Elementary School's Instructional Improvement committee and Interpersonal and Leader Behaviors," Technical Report No. 230, Wisconsin Research and Development Center for Cognitive Learning, Madison, University of Wisconsin, 1972.

Structure and Consideration and the compatibility of the chairman and the members; 2) the interrelationship of the chairman's regard for the comfort, well being, status and contribution of the members; 3) longer monthly meetings; 4) members preferring close personal relations toward and from people; 5) fewer members; 6) a chairman who does not dominate; and 7) the involvement of the IIC in prescribed tasks. Nerlinger,[44] utilizing a version of the instrument developed in this study, found that the extent of involvement of the IIC in decision making was strongly related to the effectiveness of the units.

In the studies of decision making in IGE schools, the personnel typically have perceived their schools to be somewhat decentralized. These perceptions were significantly related to organizational and personal variables, as well as to implementation outcomes. These studies, however, have not addressed two key issues pertinent to the study of decision making in IGE schools. First, with the exception of the study by Nerlinger, the conceptualization of decision process operationalized in the studies have not accounted for major elements of involvement in decision making in IGE. The studies have either focused on the locus of the act of choice itself and, consequently, have left unexamined the involvement in other steps of the decision process, or have imposed ordinal scales on selected steps of the process which may not be accurately ordered in their importance. Also, the potency of the decisions which

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[44]Connie M. Nerlinger, "Participative Decision Making in IGE/MUS-E Schools", Technical Report No. 356. Wisconsin Research and Development Center for Cognitive Learning, Madison, University of Wisconsin, 1975. p. 90.

have been decentralized in IGE has not been determined. Second, the degree to which the studies have represented observable decision behavior in IGE schools has not been established.[45] The conceptualizations of the decision structures and decision process utilized in the studies have not been verified through observations or reports of real world events in IGE schools.

Little information has been gathered regarding the extent of involvement of various individuals and groups in the process of making potent decisions in IGE schools. Studies have not been conducted to determine the discrepancy between the present or "real" decision structure utilized and the desired or "ideal" decision structures to be utilized, or the present level of decision involvement of teachers and the desired level of decision involvement of teachers in IGE. Without such information, the degree to which IGE schools have been successful in restructuring the decision process can not be determined.

Statement of the Problem

The purpose of this study was to develop instrumentation to measure the discrepancy between the present, or real, and the desired, or ideal decision structure and involvement in the decision-making process concerning potent decisions in IGE schools. Presumably, IGE has changed the decision structure of schools from a relatively centralized process to a more decentralized and interactive process. Little information is available,

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[45] Albert M. Holmquist, "A Definitional Field Study of Decision Making in Individually Guided Education Elementary Schools," Doctoral dissertation, University of Wisconsin-Madison, 1976.

however, regarding the decision structure, the content of the potent decisions, or the extent of involvement of various individuals or groups in the potent decisions in IGE schools. The degree to which present decision structures and present decision involvement match the desired structure and involvement in IGE is not known. Systematic inquiry into these areas may help verify decision theory and improve the implementation of IGE. Such systematic inquiry requires valid and reliable instrumentation.

This study was designed to develop an instrument useful in correlational and longitudinal research. Consequently, the instrument should provide a means for measuring relationships with other variables at a given time and should provide a means for measuring the discrepancy between the real and ideal decision structure and the real and ideal decision involvement as schools progress into IGE.

Specifically, this study was designed to develop a valid and reliable instrument which:

1) Measured, for descriptive purposes, the perceptions of the real decision structure for potent decisions in IGE schools.
2) Measured, for descriptive purposes, the perceptions of the ideal decision structure for potent decisions in IGE schools.
3) Measured, for descriptive and correlational purposes, the perceptions of the real extent of involvement of teachers in the decision-making process for potent decisions in IGE schools.

4) Measured, for descriptive and correlational purposes, the perceptions of the ideal extent of involvement of teachers in the decision-making process for potent decisions in IGE schools.

Definition of Terms

The following terms were defined for the study as:

1) Real Decision Structure--the individual or group perceived as presently responsible for making the final decision on potent decisions in IGE schools.
2) Ideal Decision Structure--the individual or group which ideally should be responsible for making the final decision on potent decisions in IGE schools.
3) Potent Decisions--those decisions which deal with the major tasks and functions in IGE schools.
4) Real Decision Involvement--the extent to which teachers presently perceive themselves as being involved in the decision-making process concerning potent decisions in IGE schools.
5) Ideal Decision Involvement--the extent to which teachers desire to be involved in the decision-making process concerning potent decisions in IGE schools.

CHAPTER II

DESIGN OF THE STUDY

This chapter presents the procedures utilized in each of the three phases of the study: 1) the definition phase, 2) the instrument construction phase, and 3) the instrument testing phase. Then, the significance and limitations of the study are delineated.

The Definition Phase

The definition phase of the study was designed to accomplish three objectives: 1) to verify the relationship between the model of the decision-making process utilized in the study and the decision-making process as it occurred in IGE schools; 2) to identify the decision structures utilized in IGE schools; and 3) to identify and categorize the content of decisions made in IGE schools.

Three varying modes were utilized to gather the data necessary to accomplish these objectives. First, open-ended questionnaires were administered to participants at three conferences for IGE practitioners held in the fall of 1973. One conference was for IGE school-level and district-level personnel serviced by an IGE regional organization in Wisconsin. The other two conferences were for school level, district level, state department level, and college level personnel actively involved in IGE from throughout the nation. The participants were asked to identify the one or two most significant problems an IGE principal encounters in four categories of administrative activity: 1) Planning,

2) Changing or Motivating, 3) Organizing or Coordinating, and 4) Assessing or Evaluating. The items nominated were analyzed for the content of decisions made in IGE schools.

Second, interviews were conducted with teachers, unit leaders, and principals in nine IGE schools to identify the decision structures, the content of decisions, and the process followed in making decisions in those schools. The interview schedule is presented in Appendix A. The nine schools were selected by the state IGE Coordinators in California, New Jersey, and South Carolina; each selected three schools in their state considered exemplary in five areas: 1) the school's organization into multiaged units; 2) the functioning of the Instructional Improvement Committee; 3) the functioning of the units; 4) the individualization of at least one curricular area; and 5) the involvement of the staff in decision making.

The nine schools also were selected to represent diverse socioeconomic factors. Three were located in economically depressed urban areas, two in nearly all-white middle class suburban areas, two in lower-middle and middle class suburban areas with 30 percent or more minority population, and two in rural areas with 30 percent or more minority population. The schools varied in size from seven teachers and 190 students to 38 teachers and nearly 1,100 students. One school was a K-3 campus, one a K-5, one a K-8, and six were K-6. Five of the schools had racially integrated staffs and four had only one or two minority teachers. Two schools had women principals and one school was a non-public school with a teaching-principal. Two of the schools were in their first year of IGE implementation, three were in their second year, and four were in their third year.

The interview schedule was piloted in three Wisconsin IGE schools and refined for use in the nine schools selected. A focused interview format soliciting open-ended responses was utilized for the final interview schedule. The final interviews were conducted in January and February, 1974.

Third, IGE research and implementation literature was reviewed to identify decision structures and decision content either found to exist in the field or prescribed for model IGE operations. This review was conducted after the questionnaire and interview data had been compiled and categorized, thus reducing the structuring influence the literature may have had on the researcher's interpretation of the data collected in the field. Only two decision content items and no decision structures were produced through the literature review that had not been extracted previously from the field data. The two content items were taken from a study by Paul[46] and involved decisions concerning the relationships between outside agencies and the inservice programs of the schools.

Through content analysis of the questionnaire, interview, and literature review data, seventeen decision structures and 220 decision content items were compiled. The positions or groups making up the seventeen decision structures were collapsed into 13 categories:

1) Board of Education

2) Superintendent or other Central Office Personnel

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[46]Douglas A. Paul, "The Diffusion of an Innovation Through Inter-organizational Linkages: A Comparative Case Study," Technical Report No. 308, Wisconsin Research and Development Center for Cognitive Learning, Madison, Wisconsin, 1974.

3) Negotiation Teams

4) Systemwide Program Committee

5) Principal or Assistant Principal

6) Entire Faculty as a Group

7) Instructional Improvement Committee

8) Unit Leader

9) Unit Teachers as a Group

10) Individual Teacher

11) Paraprofessionals

12) Parents or Parent Advisory Committee

13) Student

The 220 decision content items were categorized into six decision areas defined as:

1) External Environments: decisions concerning relationships between a school or school district and the students' homes, the community, the State Educational Agency, and other outside agencies such as other schools, teacher education institutions, IGE leagues, and the Wisconsin R and D Center.

2) Financial and Physical Resources: decisions concerning the acquisition of money, materials, and space and their allocation among competing groups or persons within a school or school district.

3) Instructional Program: decisions concerning the philosophy, goals, objectives, and activities toward which student behavior

is to be directed. This includes student behavior during structured instructional time as well as student behavior during unstructured instructional and recreational time. Thus decisions concerning student behavior during recess, IMC study, and moving to and from instructional groups would be considered part of the total Instructional Program.

4) Organization and Operations: decisions concerning the arrangement of a school or school district into roles, with duties and responsibilities, the interrelationships among these roles, and the parameters within which role incumbents must operate. Specifically, Organization and Operations decisions concern such items as:

   - The membership, functions, and operations of the SPC, IIC, I and R units, and other committee structures.
   - The duties and resonsibilities of the central office personnel, the principal, the unit leader, and the staff teacher, special area teachers, the student and intern teacher, the instructional and secretarial aide, the volunteer, and all support personnel.
   - The school calendar, the school day schedule, the determination of a school's attendance area, and the age span and size of I and R units, the length of the lunch hour.
   - The formal relationships among the various persons and committees (I and R units, IIC, parents advisory committee, etc.) within a school.
   - The formal relationships among the various schools, district-wide committees, and central office personnel within a school district.

5) Research and Evaluation: decisions concerning the processes of research and evaluation of children, teachers, administrators,

the community, and the program of a school or school district.

6) Staff Personnel: decisions regarding a school or school district's processes of staff selection, assignment, motivation, and development, and decisions concerning staff morale and interpersonal relationships.

The interview data concerning the decision-making process was organized into flow charts depicting the sequence of steps the persons interviewed perceived to be taken in their school in making a major decision. The flow charts were then compared to the decision-making model utilized in the study. Of the 62 interviews flow-charted, 56 matched the five-step process of the model. Of the six not matching the model, all six included the steps of identifying the problem, determining alternatives, choosing an alternative, and implementing the decision and excluded only the fifth step, determining effectiveness. This was considered substantial evidence verifying that the decision-making model utilized in the study accurately represented the decision-making process functioning in IGE schools.

The definition phase delineated three dimensions of decision making in IGE: 1) the decision-making process; 2) the decision structures; and 3) the content of decisions. With these dimensions defined, a decision involvement analysis instrument could be constructed for use in IGE schools.

The Instrument Construction Phase

Two objectives were to be accomplished in the instrument construction phase of the study: 1) to develop an IGE decision involvement analysis

instrument with content and construct validity, and 2) to determine the appropriate scaling procedures to be utilized on the instrument.

Validity

The types of validity required of an instrument vary according to the purposes for which the instrument is intended.[47] The instrument developed in this study had two primary purposes: 1) to describe real and ideal decision structures utilized and desired in IGE schools, and 2) to infer the real and ideal degree of involvement of teachers in the decision-making process in IGE schools. Consequently, evidence regarding the content and construct validity of the instrument was needed.

As Nunnally[48] pointed out, content validity is not tested after a measure is constructed; rather it should be ensured by the plan and procedures of construction. Nunnally listed two major standards for ensuring content validity: "1) a representative collection of items and 2)'sensible' methods of test construction."[49] The procedures utilized to define the dimensions of decision making in IGE schools, described in the previous section, ensured that the domain was adequately defined and that the "universe" of items collected represented events occuring in IGE schools.

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[47]National Committee on Test Standards, "Three Characteristics of Validity," in David A. Payne and Robert F. McMorris, eds., Educational and Psychological Measurement (Waltham, MA: Blaisdell, 1967), p. 77.

[48]Jum C. Nunnally, Psychometric Theory (New York: McGraw Hill, 1967), p. 80.

[49]Ibid., p. 81.

Since the instrument was intended to measure the decision structures utilized and the decision involvement of teachers in the major or potent decisions in IGE schools--not in all decisions in IGE schools--a panel of experts was utilized to determine which of the 220 decision items were the most potent. The panel was constituted of two teachers, two unit leaders, and two principals representing reputationally superior IGE schools in Wisconsin. In addition, two Wisconsin R and D Center Principal Investigators involved in organizational theory with emphasis specifically on decision making were included on the panel. The panel was directed to eliminate overlapping items, reword ambiguous items, determine the appropriateness of an item for its designated category, and come to a common meaning of each item. Then, the panel was directed to rate the importance or potency of each item using a five-point scale with "1" representing "very little" importance, "2" representing "little" importance, "3" representing "some" importance, "4" representing "much" importance, and "5" representing "very much" importance. Items receiving mean scores between 3.5 and 5.0 were considered to have the degree of potency needed to be included on the instrument. For the pilot instrument, seven items were randomly selected from the pool of potent items for each of five decision content categories: External Environments, Financial and Physical Resources, Organization and Operations, Staff Personnel, and Research and Evaluation. Fourteen items were randomly selected from the potent Instructional Program decisions, representing the importance of that category. The rating form utilized by the panel of experts is presented in Appendix B.

To ensure that the format and readability of the instrument followed "sensible" methods, a first-cut version of the instrument was developed and utilized in a study of decision involvement in a Wisconsin school district with IGE elementary schools. Respondents provided feedback regarding the clarity and readability of the directions and format of the instruments. Refinements were necessary to shorten the administration of the instrument and to require less respondent discrimination between varying levels of involvement among the five steps of the decision process. The first-cut version of the instrument is shown in Appendix C.

Based upon the feedback received from respondents to the first-cut instrument, the decision process outlined in questions 3 and 4 was collapsed into one general statement regarding involvement in the total decision-making process. Subsequently, the response set was modified to represent degree of involvement rather than frequency of involvement. Also, minor modifications were made in the questions and the response set for questions 1 and 2. These refinements were utilized in construction of the pilot instrument, as can be seen in Appendix D.

The extent of evidence required for a construct to have validity varies according to the number of related variables in the construct and the tightness of the definition of those variables.[50] Relatively few decision structures were identified in IGE schools and each was carefully defined as a person or a group with specific membership. For

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[50] Ibid., p. 85.

such a concrete construct, the comparison of the percentage of respondents nominating the decision structures in IGE schools as real and ideal was considered adequate evidence for initial construct validity. In contrast, decision involvement was a relatively abstract construct and required additional evidence for initial validation.

Nunnally noted three major aspects of the process of establishing validity for abstract constructs:

> 1) Specifying the domain of observables; 2) determining to what extent all, or some, of those observables correlate with each other or are affected alike by experimental treatments, and 3) determining whether or not one, some, or all measures of such variables act as though they measure the construct.[51]

The domain of decision involvement in IGE was carefully defined, as described previously. The extent to which the observables in the domain were similarly affected, or reacted similarly in varying decision settings, and the extent to which the instrument acted as though it measured real and ideal decision involvement were determined in the third phase of the study, testing the instrument.

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[51] Ibid., p. 87.

Scaling

The procedures chosen for scaling a measure require several assumptions be made that effect the appropriateness of the interpretations of the results of that measure.[52] Three assumptions were made in the construction of the IGE Decision Involvement Analysis Instrument. First, no leveling or ordering was considered adequate to describe a hierarchy of decision structures. Consequently, a nominal scale was utilized, making data gathered concerning decision structures appropriate only for descriptive purposes or for non-parametric statistical analysis.

Second, decision involvement was assumed to have no zero point. "Very Little" was considered to be the lowest point which could be represented numerically on a five-point Likert scale. Although the intervals between levels of involvement were not defined, they were assumed to be equal distances apart. Based upon these assumptions, interpretations and statistical treatments of decision involvement data appropriate for ordinal scales could be made with confidence, but interpretations and statistical treatments implying magnitude or quantity needed to be made with care.

Third, decision involvement in the potent decisions in IGE schools was assumed to be a unitary factor. Consequently, the three dimensional data matrix to be obtained in the study could be collapsed into a two-dimensional scale in which the responses of all respondents from a school

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[52]Fred N. Kerlinger, Foundations of Behavioral Research, 2nd ed. (New York: Holt, Rinehart and Winston, 1973), pp. 426-441.

on all items of the instrument could be summed to represent the involvement of the teachers in that school in decision making. The two dimensions could be collapsed further into a unidimensional scale in which the responses from all of the schools could be summed to represent the decision involvement of teachers in IGE schools. The unidimensional scale assumed linearity and that only one factor, involvement in decision making, was measured by that section of the instrument. Factor analysis was conducted on the results of both the pilot and final instruments to determine whether the assumptions of unidimensionality could be supported. The results of these analyses are reported in Chapter III.

The construction phase of the study ensured that the instrument had content validity and designed procedures to provide initial evidence regarding the construct validity of the instrument. Also, the assumptions inherent in the scaling procedures utilized were identified. The instruments could now be piloted, refined, and tested.

Testing the Instrument

The phase of testing the instrument had three objectives: 1) to determine whether or not the assumption of unidimensionality could be supported, and if not, to determine the appropriate factors represented by the instrument; 2) to determine the reliability of the instrument; and 3) to provide initial evidence regarding the validity of the construct "decision involvement" represented by the instrument.

Unidimensionality

Data obtained from administration of the pilot instrument and the final instrument were factor analyzed to determine the support for the

assumptions of unidimensionality. Through use of PROGRAM BIGFACT[54], the data were subjected to step-down analysis for the R mode with both orthogonal and oblique rotations. This produced item weightings for eight factors down to two factors. Results of these analyses are presented in Chapter III.

Sample and Data Collection Procedures

The pilot version of the instrument was administered in five schools from those selected for interview sites that were considered most likely to provide the widest variance in responses. Again, the schools were located in California, New Jersey, and South Carolina. Each principal administered the instrument to the teachers and unit leaders of his or her school at the beginning of a faculty meeting or at a meeting called specifically for completing the instrument. One hundred and four of the 106 teachers and unit leaders in the pilot schools responded to the pilot instruments. The completed forms were collected in unmarked envelopes by the principal and returned to the researcher.

One hundred IGE schools which had been randomly selected for participation in recent studies by Evers[55] and Gramenz[56] were invited to participate in testing the final instrument. Thus, data gathered by Evers

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[53]Dennis W. Spuck, Donald N. McIsaac, and John A. Berg, PROGRAM BIGFACT (Madison, WI: Wisconsin Information Systems, 1972).

[54]Nancy A. Evers, "An Analysis of the Relationship Between the Effectiveness of the Multiunit Elementary School's Instruction and Research Unit and Interpersonal Behaviors," Technical Report No. 298, Wisconsin Research and Development Center for Cognitive Learning, Madison, University of Wisconsin, 1974.

[55]Gary W. Gramenz, op. cit.

and Gramenz regarding the effectiveness of I and R Unit operations could be related to the data gathered regarding decision making. The 100 schools were verified as meeting four minimal standards for IGE schools: 1) the entire school was organized into the multiunit pattern; 2) the instructional programing model was utilized in at least one curricular area; 3) the school had a functioning IIC which met at least once a week; and 4) the school had multiage grouping in each I and R Unit. Seventy-seven of the 100 schools agreed to participate. Of the 23 not participating, 13 indicated that their staffs had decided not to be involved in another study during the 1973-74 school year and 10 indicated that their school schedule was already planned for the remainder of the year and time would not allow them to participate. The 77 participating schools were from 13 states representing New England, the east coast, the southeast, the midwest, the mountain states, and the west coast. The instrument was completed by 1266 IGE teachers and unit leaders.

The principals were instructed to administer the instrument to the teachers and unit leaders at the beginning of a faculty meeting or at a meeting called specifically for completing the instrument. Each principal was asked to read the instructions, to ensure that respondents did not confer with each other, to collect the completed instruments in sealed, unmarked envelopes, and to return the instrument to the researcher.

In addition to being utilized to determine the support for the assumption of unidimensionality, the data collected in the 77 schools were utilized to establish the reliability levels and initial evidence of construct validity of the instrument.

Reliability

To determine the reliability of the final instrument, a test of internal consistency[56] was conducted on the real and ideal decision involvement scales. The correlation of items to scale and to the total instrument, and the alpha-coefficients of the scales and the total instrument are reported in Chapter III.

Construct Validity

To provide initial evidence regarding the construct validity of the instrument's measures of real and ideal decision involvement, two sets of hypotheses concerning the relationship between teacher involvement in decision making and perceived effectiveness of I and R Unit operations were developed. The first set was based upon the assumption that decision involvement consisted of a unitary factor. The second set was based upon the assumption that multiple factors would be discovered through the factor analysis of the decision involvement data. Only one set of assumptions would be supported by the factor analysis of the data of the final study and, consequently, only one set of the hypotheses would be tested in the final study.

The literature supporting the hypothesized relationships between teacher involvement in the decision-making process and the effectiveness of I and R unit operations in IGE schools was carefully reviewed in a study by Nerlinger. She summarized:

> . . . there is supportive research in industry to show a positive relationship between participative decision making and production. Considerable research in school settings related decision sharing positively to teacher attitude and some research has been done to tie participation to enhanced

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[56]Dennis W. Spuck, Program TSTAT (Madison, WI: Wisconsin Information Systems, 1971).

problem solving by teachers.[57]

Two null hypotheses were developed to test the relationship between a unitary factor of teacher involvement in decision making and effectiveness of I and R unit operations:

H(1) There is no significant relationship between the perceived real involvement of teachers in the decision-making process for potent decisions and the perceived effectiveness of I and R unit operations in IGE schools.

H(2) There is no significant relationship between the discrepancy of perceived real and ideal involvement of teachers in the decision-making process for potent decisions and the perceived effectiveness of I and R unit operations in IGE schools.

The following hypotheses were developed to test the expected relationship between a multi-factor view of teacher involvement in decision-making and effectiveness of I and R unit operations:

H(3) There is no significant relationship between the perceived real involvement of teachers in the (Factor 1) of the decision-making process for potent decisions and the perceived effectiveness of I and R unit operations in IGE schools.

Hypotheses similar to H(3) were developed for each factor.

H(4) There is no significant relationship between the discrepancy of perceived real and ideal involvement of teachers in

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[57] Connie M. Nerlinger, op. cit., p. 15.

the (Factor 1) of the decision-making process for potent decisions and the perceived effectiveness of I and R unit operations in IGE schools.

Hypotheses similar to H(4) were developed for each factor.

The I and R Unit Operations Questionnaire, developed for the studies by Evers[58] and Gramenz,[59] consisted of fifty-one items based on the performance objectives identified as the responsibility of the I and R unit.[60] The items were grouped into four categories: Instructional Program, Staff Development, Organizational Operations, and School-Community Relations. Reliability levels, defined as internal consistency, for each scale and for the total instrument are presented in Table I.

TABLE I

RELIABILITY LEVELS FOR THE I AND R UNIT OPERATIONS QUESTIONNAIRE

Categories	N=673
Instructional Program	.9329
Staff Development	.8209
Organizational Operations	.9823
School-Community Relations	.7805
Total	.9589

Source: Evers, op. cit., p. 46.

[58]Nancy A. Evers, op. cit.

[59]Gary W. Gramenz, op. cit.

[60]Herbert J. Klausmeier, et al., Individually Guided Education and the Multiunit Elementary School: Guidelines for Implementation (Madison, Wisconsin: Wisconsin Research and Development Center for Cognitive Learning, 1971), pp. 91-126.

The statistical procedure utilized to test the strength of the relationships between variables was the Pearson product-moment correlation coefficient. PROGRAM WISE*STAT.DISTX[61] was utilized for this analysis. In addition, graphic representations for the hypotheses tested were obtained through use of CROSTAB2.[62]

Summary

In summary, the study had three phases, each with a set of objectives to be achieved:

The Definition Phase:

1) To verify the relationship between the model of the decision-making process utilized in the study and the decision-making process as it occurred in IGE schools.
2) To identify the decision structures utilized in IGE schools.
3) To identify and categorize the content of decisions made in IGE schools.

The Instrument Construction Phase:

4) To develop an IGE Decision Involvement Analysis Instrument with content and construct validity.
5) To determine the appropriate scaling procedures to be utilized on the instrument.

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[61] Dennis W. Spuck, Frederick P. Stofflet, and David J. Fleckenstein, PROGRAM WISE*STAT.DISTX (Madison, WI: Wisconsin Information Systems, 1971).

[62] Peter Wolfe, Jim Allen, and Ralph St. John, CROSTAB2, 1st Revision (Madison, WI: Academic Computing Center, 1975).

The Instrument Testing Phase:

6) To determine if assumptions of unidimensionality could be supported and, if not, to determine the appropriate factors represented by the instrument.

7) To determine the reliability of the instrument.

8) To provide initial evidence regarding the validity of the construct "decision involvement" represented by the instrument.

The achievement of these objectives held considerable import for the significance of the study.

Significance of the Study

The study had significance in three areas. First, decision theory was advanced through the validation of one model of the decision-making process. The validation procedures extended both into the concrete world of phenomena and into the abstract world of relationships between constructs. The study related reports of decision events to a decision model, a step which had not been undertaken previously for validation of intuited theories of the decision-making process. Also, the study provided means of quantifying to the ordinal level involvement in the decision-making process. Consequently, relationships between decision involvement and other constructs could be tested through parametric statistical procedures not appropriate for the nominal level of measurement provided in previous studies.

Second, the study provided an instrument which may be utilized in future studies investigating the relationship between decision involvement and a variety of personal, organizational, and situational constructs.

Such studies would add further evidence regarding the construct validity of the decision-making model utilized in this study.

Third, the study provided a variety of information useful in analyzing the degree to which IGE has restructured the decision-making process in elementary schools. Information was produced regarding the decision structures presently being utilized in IGE schools, the decision structures teachers ideally would utilize in IGE schools, the present level of involvement of teachers in the decision-making process in IGE schools, the desired level of involvement of teachers in the decision-making process in IGE schools, and the relationship between teacher involvement in the decision-making process and the effectiveness of I and R unit operations in IGE schools. Thus, the study provided a means for initial verification of the hypothesized benefits of shared decision-making in the IGE school.

Limitations of the Study

The instrument constructed and the decision-making process validated in this study were limited to data gathered in IGE schools. The decision-making process utilized in IGE schools may not be the same as that utilized in non-IGE schools or in non-school organizations. Studies need to be conducted in a variety of organizations before the decision-making model utilized in this study could be accepted as an adequate representation of the decision-making process in organizations.

Also, the procedure utilized to verify the relationship between the model of the decision-making process and the decision-making process utilized in IGE schools relied heavily upon reports of past events. The interview procedure may have led to a rational, sequential reordering of

events which may not have actually occurred in such a rational, logical pattern. Observational studies would provide more adequate data to verify the relationship of the model and the decision-making process utilized in IGE schools.

Finally, the statistical procedures utilized in this study assumed a linear relationship between involvement in decision making and the effectiveness of I and R unit operations. It is conceivable that a curvilinear relationship exists between the two variables, with a middle level of involvement in decision making correlating to the greatest degree of effectiveness and both less and greater decision involvement correlating with decreased effectiveness. The linear statistical procedures utilized were considered the best means available to provide a "practical first approximation to a complicated relationship."[63]

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[63]William L. Hays, Statistics for the Social Sciences, 2nd ed. (New York: Holt, Rinehart and Winston, 1973), p. 701.

CHAPTER III

PRESENTATION AND ANALYSIS OF THE DATA

This chapter begins with the presentation and analysis of the reliability and factor analysis data from the pilot version instrument. Next, the reliability scores and factor analysis of the final version instrument are presented. Then, data describing the real and ideal decision structures and the real and ideal levels of involvement of IGE teachers in decision making are discussed. The chapter concludes with the presentation and analysis of the data relating decision involvement and I and R unit effectiveness.

Pilot Version Reliability and Factor Analysis

The pilot version instrument had six subscales representing decision involvement in what were thought to be mutually exclusive and exhaustive categories of decision content. The reliability scores of the subscales and of the total instrument were determined by a test for internal consistency of real decision involvement items. Table II presents the correlations to scale and to the total instrument of the decision items in each scale.

Each of the subscales contained one or more items with low correlation to scale or with higher correlation to the total instrument than to scale. Consequently, the alpha coefficients of four of the six subscales were lower than desired, as can be seen in Table III.

TABLE II

CORRELATION (R) OF SCORES TO SCALE AND TO THE TOTAL PILOT VERSION INSTRUMENT REAL DECISION INVOLVEMENT ITEMS (N=104)

SCALE AND ITEM NO.	r-Item to Scale	r-Item to Total
External Environments		
2	.5560	.4238
5	.3544	.1968
18	.6129	.5130
30	.4433	.5009
45	.6574	.5592
46	.6165	.5416
49	.6351	.4095
Financial and Physical Resources		
10	.4015	-.0894
13	.3520	.2151
29	.6577	.5644
33	.1737	.0421
36	.4560	.3083
38	.6211	.5386
44	.6262	.4598
Instructional Program		
1	.5836	.4774
3	.6149	.5083
4	.5171	.4517
8	.3153	.3485
9	.3572	.2374
19	.5060	.4155
21	.6428	.5919
22	.5560	.5168
23	.6810	.6930
25	.7926	.6822
26	.7351	.6698
42	.7043	.6470
47	.5649	.6020
48	.6329	.5312

TABLE II (continued)

Research and Evaluation		
12	.2741	.1769
14	.4535	.4457
16	.6283	.6244
27	.4866	.2959
34	.7252	.6548
37	.5893	.5639
39	.4484	.3296
Staff Development		
15	.5264	.3881
17	.7256	.5849
20	.6947	.5293
31	.7300	.5970
32	.5620	.5562
35	.5996	.5072
43	.3358	.1945
Staff Personnel		
6	.5734	.2365
7	.4842	.4067
11	.5438	.4155
24	.6068	.4634
28	.6629	.6211
40	.5952	.5059
41	.4368	.3718

TABLE III

RELIABILITY SCORES OF PILOT VERSION SCALES AND TOTAL INSTRUMENT (N=104)

SCALE	ALPHA
External Environments	.6251
Financial and Physical Resources	.4558
Instructional Program	.8486
Research and Evaluation	.5345
Staff Development	.7163
Staff Personnel	.6365
Total Instrument	.9203

In addition to the low reliability scores of the scales, the administration of the pilot version instrument averaged 40 minutes, well over the maximum of 25 minutes desired so that the instrument could be utilized in a series of measures. Since the alpha coefficient of the total pilot version instrument was high, items could be deleted without considerable loss to the reliability. Reducing the number of items, however, would reduce the reliability of the scales even further.

Factor analysis was utilized to help determine if the six scales would be retained on the final version instrument or, if not, which items would be deleted. The six-step orthogonal rotation of the

factor analysis dispersed the items of the scales widely among six factors. Table IV presents the loadings of the items on each of the six factors. The asterisks indicate the factor into which the item was placed. The seven items of "External Environments" were placed in three different factors, the seven items of "Financial and Physical Resources" in five factors, the 14 items of "Instructional Program" in five factors, the seven items of "Research and Evaluation" in five factors, the seven items of "Staff Development" in four factors, and the seven items of "Staff Personnel" in three factors. Furthermore, each of the factors had numerous items with nearly equal loadings in two or more factors. It was evident that the theoretically defined structures were not validated in the six-step rotation.

Conceptually and mathematically, the most credible factors of the pilot data emerged in the two-step rotation. Conceptually, the items could be categorized as "Instruction Related" and "Management Related." The Instruction Related factor accounted for 78.3% of the variance, however, and made the usefulness of a second factor questionable. In addition, 11 of the 22 items placed into the Management Related factor had loadings of nearly equal weight on factors I and II.

TABLE IV

FACTOR LOADINGS OF 49 PILOT ITEMS ON SIX STEP ORTHOGONAL ROTATION (N=104)

SCALE AND ITEM NO.	FACTOR LOADINGS I	II	III	IV	V	VI
External Environments						
2	.164	-.067	-.226	.616*	-.110	-.048
5	.022	-.046	-.016	.411*	.032	.046
18	.468*	-.131	-.072	.378	-.037	.454
30	.160	-.287	-.520*	.148	.325	.026
45	.446*	-.242	-.237	.133	.090	-.140
46	.656*	-.105	-.137	-.020	.417	-.141
49	.753*	.072	-.026	-.020	.077	.033
Financial and Physical Resources						
10	-.086	.118	.013	-.084	-.125	.642*
13	.017	.096	-.289	.358*	.189	.233
29	.396*	-.229	-.381	.121	-.224	.323
33	-.149	.047	-.186	-.011	.619*	.027
36	.217	.121	-.332	.180	.391*	.066
38	.514*	-.150	-.329	.053	-.121	.106
44	.185	-.021	-.599*	.173	.129	.141
Instructional Program						
1	.380	-.427*	.062	.151	-.033	-.146
3	.215	-.586*	-.064	.093	-.046	-.113
4	.102	-.555*	.030	.204	.071	.067
8	-.042	-.250	-.140	.529*	-.183	-.119
9	.261	-.117	-.016	-.017	-.048	-.450*
19	.520*	-.297	.256	.170	.001	.072
21	.572*	-.377	.036	.191	.006	.276
22	.184	-.530*	-.179	.094	.027	-.024
23	.262	-.554*	-.388	.063	.099	.222
25	.606*	-.567	-.063	-.052	.015	-.105
26	.358	-.609*	-.251	.024	-.049	.024
42	.639*	-.354	-.205	-.015	-.005	-.138
47	.485	-.157	-.520*	-.040	.094	-.017
48	.531*	-.336	-.193	-.101	-.097	-.218

TABLE IV (continued)

	I	II	III	IV	V	VI
Research and Evaluation						
12	-.131	-.124	-.082	.452*	-.104	-.002
14	.261	-.295	-.126	.189	-.217	.535*
16	.389	-.455*	-.105	.151	.311	.123
27	.161	-.185	.022	.071	.688*	-.244
34	.496*	-.421	-.263	.043	-.038	-.184
37	.465*	-.175	-.315	.071	.199	-.061
39	.212	.079	-.307	.477*	-.271	-.371
Staff Development						
15	.020	-.136	-.249	.510*	.202	.165
17	.165	-.506*	-.250	.282	-.094	-.011
20	-.043	-.477*	-.423	.202	.197	.149
31	.229	-.427	-.505*	-.055	.049	.139
32	.500*	-.429	-.136	-.094	-.201	.047
35	-.015	-.319	-.619*	.237	-.026	-.098
43	.061	.033	-.386*	-.065	.184	-.115
Staff Personnel						
6	.033	-.130	.107	.475*	.295	-.171
7	.103	-.165	-.003	.661*	.273	.168
11	.009	-.650*	.031	.152	-.013	-.093
24	.160	-.318*	-.237	.129	.129	.273
28	.341	-.531*	-.151	-.005	.402	-.012
40	.149	-.108	-.608*	.224	.218	-.296
41	.021	-.113	-.622*	.102	-.062	.115

Due to the lack of reliability and lack of factor credibility of the six scales on the pilot version instrument, and due to the conceptual and mathematical shortcomings of the factors emerging in each step of the pilot version factor analysis, the domain of decision content was left uncategorized for the final version instrument. To shorten the instrument, only the 30 decision content items of the pilot version instrument determined to have the highest correlation to the total instrument were included on the final version instrument. The 30 items sampled each of the six original scales, which ensured that content validity was not violated.

Results of the pilot study indicated that the content of potent decisions in which IGE teachers were involved was more appropriately conceptualized as one factor than as either the pre-designed or the mathematically extracted multiple factors. Results of the final study were subjected to factor analysis to determine if the unifactor conceptualization of the content dimension of decision making could be substantiated or, if not, what factors best described the content of decision involvement.

Final Version Factor Analysis and Reliability

The final version instrument was designed to elicit responses to four questions about each of 30 decision content items. The first and second questions asked the respondent to nominate the real and the ideal person or group responsible for the final decision on each content item. Questions three and four asked the respondent to rate

the real and ideal level of involvement of teachers in the decision-making process regarding each content item. This was the same format as was utilized for the pilot version.

Factor analysis of the final version data was completed prior to tests for reliability so that reliability scores could be obtained for factors determined to be credible. Orthogonal rotations beginning with eight steps and descending to two steps were computed with no eigenvalue cutoff designated. Highly credible factors emerged in the three-step rotation. Although a few items were weighted nearly equally on two factors, the three factors exhibited little mathematical confusion. Each of the three factors had a core of items that remained intact through all of the descending rotation steps with the strongest mathematical and conceptual relationships emerging in the three step rotation.

Conceptually, the three factors represented varying degrees of the scope of decisions in IGE schools. Items placed into the same factor had the same scope of primary impact regardless of the decision content area represented. Consequently, each factor included items from a variety of decision content areas such as financial, personnel, instructional program, and evaluation.

The three factors were named according to the scope of primary impact of the decision content items of each factor: Factor I, Extra-School; Factor II, Schoolwide; Factor III, Unit and Subunit. The mean scores and standard deviations of the items in each factor are presented in Table V. The loading of each item on each factor is presented in Table VI. The wording of each item is presented in Appendix E.

TABLE V

MEAN SCORES AND STANDARD DEVIATIONS OF RESPONSES TO REAL DECISION 3, INVOLVEMENT ITEMS OF FINAL VERSION INSTRUMENT FACTORS (N=1266)

	ITEM*	MEAN SCORE	STANDARD DEVIATION
FACTOR I			
	28	1.701	1.130
	21	2.170	1.204
	24	2.348	1.270
	29	1.961	1.137
	22	2.107	1.199
	19	1.838	1.093
	23	2.157	1.263
	15	1.383	0.838
	2	1.852	1.063
	30	2.356	1.531
	27	2.264	1.362
	7	1.698	1.172
	11	2.408	1.301
FACTOR II			
	6	3.028	1.240
	10	2.699	1.251
	1	3.482	1.106
	4	2.966	1.239
	12	2.905	1.392
	5	2.248	1.301
	3	3.934	1.153
	9	3.736	1.162
	14	2.352	1.248
	13	2.302	1.203
FACTOR III			
	17	4.002	1.170
	26	3.970	1.203
	16	4.217	1.014
	18	3.890	1.187
	25	3.400	1.459
	8	3.596	1.194
	20	3.252	1.380

*Items are listed in order of placement by factor analysis.

TABLE VI

FACTOR LOADINGS OF FINAL VERSION REAL DECISION INVOLVEMENT ITEMS ON FACTORS DERIVED FROM THE THREE-STEP ORTHOGONAL ROTATION (N=1266)

ITEM	FACTOR I	FACTOR II	FACTOR III
28	.589	.001	-.110
21	.588	-.163	-.152
24	.544	-.274	-.206
29	.543	-.117	-.049
22	.531	-.205	-.097
19	.531	-.123	-.103
23	.517	-.259	-.155
15	.508	-.104	.005
2	.453	-.335	.080
30	.447	-.025	-.267
27	.440	-.142	-.158
7	.437	-.268	-.109
11	.328	-.285	-.296
6	.118	-.667	-.145
10	.243	-.601	-.105
1	.210	-.511	-.183
4	.197	-.511	-.098
12	.146	-.506	-.093
5	.248	-.500	-.050
3	-.027	-.473	-.381
9	.040	-.469	-.254
14	.424	-.462	-.163
13	.392	-.439	-.121
17	.090	-.105	-.685
26	.145	-.101	-.670
16	.030	-.140	-.670
18	.161	-.173	-.652
25	.251	-.132	-.595
8	.101	-.405	-.511
20	.381	-.176	-.507

Six items were weighted nearly equally on more than one factor in the three-step rotation. To determine the factor in which these items should be placed, the conceptual relationship between each item and the strongest items in each factor was examined. In addition, the movement pattern of the six items from factor to factor was examined as the analysis descended from eight to three rotation steps. The cluster of items with which the six items tended to move was considered in determining the factor in which to place the item.

Of the six confused items, three were weighted nearly equally on the Extra-School and the Schoolwide Factors. All three were determined to belong with the original factor into which they were placed: Item 2, "the amount of money designated for implementation of new programs within the school," was left in the Extra-School Factor because of the impact the decision had on the school district budget, on district tax rates, and on political considerations of board members and district level personnel; item 14, "The changes to be made in the schoolwide organizational pattern," and item 13, "The criteria to be utilized in evaluating the effectiveness of IGE within a school," were left in the Schoolwide Factor because the primary impact of the decisions would be upon the program and staff of the IGE school.

Two items were weighted nearly equally on the Schoolwide and Unit-Subunit factors. Both were determined to belong with the factor into which they were placed originally. Item 8, "The duties and

responsibilities of members in a unit," remained with the items forming the core of the Unit-Subunit factor in every rotation step in the analysis. Even though general job descriptions could set guidelines regarding the duties and responsibilities of all unit leaders, teachers, and aides for an IGE school, each unit could modify members' roles to fit their needs. The major impact of such decisions would be at the unit or subnit level. Thus, item 8 remained with the Unit-Subunit factor mathematically and conceptually. Item 3, "the nature and duration of specific instructional activities," was the least consistent item on the instrument. It was weighted nearly equally on three separate factors in every rotation step of the analysis except the three-step. Conceptually, the nature and duration of an instructional activity would seem to have primary impact on the students and staff within one unit. As an entire school changes to new methods and new materials to individualize instruction, however, many instructional activity decisions have schoolwide impact. For instance, the nature and recommended time span of any activity in the Developing Mathematical Process (DMP) would be the same regardless of the unit in which the program was being utilized. A school deciding to implement DMP would in effect be making a schoolwide decision about the nature and duration of math activities. Since the conceptual ties of item 3 were strong to both the schoolwide and the Unit Subunit factors, and since the factor weighting was stronger on the Schoolwide factor than on the Unit-Subunit factor, the item was left in the Schoolwide factor.

Item 11, "The relationship of art, music, and physical education to the instructional program," was nearly equally weighted on all three factors. As the item read, the decision could have been interpreted as effecting district-wide policies and budgets, schoolwide programs and schedules, or unit level programs. Since the conceptual ties of the item are equally strong among the three factors, the mathematical weighting was utilized to determine final placement of the item. Consequently, item 11 was left in the Extra-School factor. The item should be reworded to establish the scope of the decision involved and the corresponding factor into which the item should be placed before future administrations of the instrument.

After three factors were established through the factor analysis of the final version data, the instrument was analyzed for reliability. Listing the factors as subscales, the reliability scores of the subscales and of the total instrument were determined by a test for internal consistency of real decision involvement items. Table VII presents the correlation of items to scale and to the final version total instrument of each decision content item. The reliability scores of the scales and of the total final version instrument are presented in Table VIII. It is evident that the three factors are internally consistent and that the total instrument is of adequate reliability for most research purposes.[64]

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[64]Dennis W. Spuck, Technical Report: Item Analysis and Reliability Assessment of School Sentiment Index, (Madison, Wisconsin: University of Wisconsin, 1971).

TABLE VII

CORRELATION (R) OF SCORES TO SCALE AND TO TOTAL INSTRUMENT OF FINAL VERSION INSTRUMENT REAL DECISION INVOLVEMENT ITEMS (N=1266)

SCALE AND ITEM	R Score To Scale	R Score To Total
Extra-School		
2	.511	.4456
7	.[illegible]432	.4881
11	.[illegible]186	.5228
15	.[illegible]663	.3796
19	.[illegible]344	.4611
21	.[illegible]124	.5375
22	.5739	.5045
23	.6076	.5557
24	.6406	.5986
27	.5178	.4581
28	.5457	.4350
29	.5238	.4439
30	.5280	.4529
School-wide		
1	.5675	.5127
3	.5207	.4483
4	.5548	.4785
5	.5616	.4844
6	.6464	.5329
9	.5191	.4293
10	.6438	.5498
12	.5574	.4475
13	.5987	.5562
14	.6388	.6110
Unit-Subunit		
[illegible]	.6330	.5546
16	.6293	.4365
17	.6710	.4661
18	.6966	.5278
20	.6628	.5957
25	.6908	.5436
26	.6835	.4891

TABLE VIII

RELIABILITY SCORES OF FINAL VERSION SCALES AND TOTAL INSTRUMENT (N=1166)

SCALE	ALPHA
Extra-School	.8032
School-Wide	.7812
Unit-Subunit	.7888
Total	.8954

The factor analysis and tests for internal consistency established that the Decision Involvement Analysis Instrument was a reliable measure of teachers' perceptions of the real and ideal decision structures utilized in making potent decisions of varying scope in IGE schools and of teachers' perceptions of the real and ideal levels of involvement of teachers in making potent decisions of varying scope in IGE schools. The descriptive data and the correlational data collected in the study could now be organized meaningfully and analyzed.

Final Version Descriptive Data

Data collected in the study provided descriptive information of teachers' perceptions regarding 18 questions about the decision-making process in IGE schools. For purposes of analysis, the 18 questions were organized into six sets of three interrelated questions.

Set I

1. What decision structures were utilized in making potent decisions of unit and subunit scope?
2. What decision structures should be utilized in making potent decisions of unit and subunit scope?
3. Was there a discrepancy between the real and ideal decision structure utilized in making potent decisions of unit and subunit scope?

The data summarizing teachers' perceptions of the real and the ideal decision structures for the decisions of unit and subunit scope in IGE schools are presented in Table IX. One may infer from the data that the unit structure was operating as a decision-making structure for decisions of unit and subunit scope.

Unit teachers as a group or as individuals were perceived by 59.5% of the teachers as making the final decision on decisions of unit and subunit scope. Unit teachers as a group were perceived by 44.6% to make the final decisions, and individual teachers were perceived by 14.9% to make the final decisions. In addition, 6.7% perceived unit leaders to make the final decision on decisions of unit and subunit scope. Unit level decision structures, therefore, were perceived by 65.2% of the teachers as responsible for making the final decision on decisions of unit and subunit scope.

Schoolwide decision structures were perceived by 19.0% of the teachers to be responsible for final decisions of unit and subunit scope. The principal was perceived by 8.7% as responsible, 4.7% perceived

TABLE IX

PERCENTAGE OF RESPONDENTS NOMINATING A POSITION OR A GROUP AS THE REAL AND THE IDEAL DECISION STRUCTURE FOR DECISIONS OF UNIT-SUBUNIT SCOPE IN IGE SCHOOLS (N=1266)

Item *	Decision Structure: Board of Education R	Board of Education I	Supt. or Other Control Office Personnel R	Supt. or Other Control Office Personnel I	Negotiation Team R	Negotiation Team I	SPC R	SPC I	Principal or Assistant Principal R	Principal or Assistant Principal I	Entire Faculty as a Group R	Entire Faculty as a Group I	IIC R	IIC I	Unit Leader R	Unit Leader I	Unit Teacher as a Group R	Unit Teacher as a Group I	Individual Teachers R	Individual Teachers I	Parents or Parent Advisory Group R	Parents or Parent Advisory Group I	Student R	Student I	No One Presently Responsible R	No One Presently Responsible I	No Response R	No Response I
8	0.4	0.2	2.3	0.6	0.1	0.2	0.5	0.8	14.1	3.6	1.4	4.2	6.4	7.2	24.7	17.3	43.3	62.2	2.2	1.2	0.0	0.0	0.0	0.0	2.5	0.2	2.1	2.3
16	0.3	0.0	0.6	0.2	0.1	0.1	0.2	0.0	2.9	0.7	3.4	3.6	11.8	1.2	6.6	3.1	56.6	65.5	23.5	21.2	0.0	0.0	0.0	0.1	0.6	0.2	3.3	3.6
17	0.4	0.0	3.3	0.8	0.1	0.1	1.7	1.7	4.4	1.2	3.2	5.1	4.9	6.2	2.4	0.8	48.7	59.8	23.9	19.7	0.0	0.0	0.0	0.0	3.2	0.5	3.8	4.0
18	1.5	0.5	5.2	0.6	0.3	0.1	4.5	3.5	4.7	0.8	3.1	5.3	4.6	6.8	4.6	1.7	55.8	69.7	8.4	5.5	0.0	0.0	0.0	0.0	2.7	0.6	4.7	5.1
20	1.6	0.3	10.4	0.8	0.3	0.2	2.9	2.8	20.3	4.0	16.7	30.4	14.2	19.1	1.9	1.5	20.7	32.5	4.1	3.6	0.0	0.0	0.0	0.0	2.1	0.0	4.9	4.7
25	0.8	0.2	3.1	0.8	0.3	0.2	0.5	0.5	12.2	3.6	1.8	4.3	2.8	5.0	5.1	3.6	47.3	61.7	10.5	14.2	0.0	0.1	0.0	0.1	10.9	0.4	4.4	5.4
26	0.9	0.4	3.7	0.9	0.2	0.2	3.3	2.4	2.0	1.2	3.2	5.5	4.5	6.1	1.7	0.7	39.8	49.4	31.5	26.5	0.0	0.1	0.2	1.1	4.8	0.6	4.1	5.1
Mean Percent Total Scale	0.8	0.2	4.1	0.7	0.2	0.3	1.9	1.5	8.7	2.2	4.7	8.3	5.6	7.4	6.7	4.1	44.6	57.3	14.9	13.1	0.0	0.0	0.0	0.2	3.8	0.4	3.9	4.3

*R = Real I = Ideal

the entire faculty as a group as responsible and 5.6% perceived the IIC as responsible.

Unit level decision structures were nominated by 74.5% as the person or group that should make the final decisions of unit and subunit scope. Fifty-seven and three tenths percent felt the unit as a group should have the final decision-making responsibility, 4.1% felt the unit leader should have the final decision-making responsibility and 13.1% felt the individual teacher should have the final decision-making responsibility for decisions of unit and subunit scope.

A schoolwide decision structure was nominated by 17.9% as the person or group that should make the final decisions of unit and subunit scope. Two and two tenths percent nominated the principal, 8.3% nominated the entire faculty as a group, and 7.4% nominated the IIC.

The discrepancies between teachers' perceptions of the real and the ideal decision structures for decisions of unit and subunit scope were not large. The largest discrepancy was in the final decision making responsibility of the unit as a group. Twelve and seven tenths percent more teachers perceived the unit as a group as the decision structure that should be responsible than perceived the unit as a group presently as responsible for decisions of unit and subunit scope. The only other discrepancy of more than five percent of the respondents was in the perceptions of the real and ideal responsibility of the principal. Six and five tenths percent fewer teachers perceived the principal as the position that should be responsible than perceived the principal presently as responsible

for decisions of unit and subunit scope. Only 8.7% of the teachers perceived the principal presently as responsible, however, for such decisions.

The data indicate that unit structures were perceived as utilized to make potent decisions of unit and subunit scope by a majority of IGE teachers. Furthermore, teachers wanted even more utilization of unit structures for making potent decisions of unit and subunit scope. Teachers did not desire individual autonomy for such decisions, however, as the unit as a group was the decision structure nominated for the increase. The concept of the unit as the appropriate decision-making structure for decisions of unit and subunit scope appeared to have been well accepted and was perceived as being implemented by over 60% of IGE teachers.

Set II

4. What decision structures were utilized in making potent decisions of schoolwide scope?
5. What decision structures should be utilized in making potent decisions of schoolwide scope?
6. Was there a discrepancy between the real and ideal decision structures utilized in making potent decisions of schoolwide scope?

The data summarizing teachers' perceptions of the real and the ideal decision structures for making the final decision of schoolwide scope are presented in Table X. The data indicate that the role of the IIC in decision making had not been firmly established.

TABLE X

PERCENTAGE OF RESPONDENTS NOMINATING A POSITION OR A GROUP AS THE REAL AND THE IDEAL DECISION STRUCTURE FOR DECISIONS OF SCHOOLWIDE SCOPE IN IGE SCHOOLS (N=1266)

Item	Decision Structure																							
	Board of Education		Supt. or other Control Office Personnel		Negotiation Teams		SPC		Principal or Assistant Principal		Entire Faculty as a Group		IIC		Unit Leader		Unit Teachers as a Group		Individual Teachers		Student		Parents or Parent Advisory Group		No One Presently Responsible		No Response	
	R	I	R	I	R	I	R	I	R	I	R	I	R	I	R	I	R	I	R	I	R	I	R	I	R	I	R	I
1	9.2	1.6	21.5	5.5	0.6	0.9	2.1	2.2	38.9	16.0	4.1	12.2	5.3	19.0	1.2	2.0	14.1	34.7	1.3	4.3	0.0	0.0	0.0	0.0	0.6	0.6	0.9	1.2
3	2.3	0.5	5.7	0.8	0.4	0.3	3.7	2.1	9.0	2.7	3.8	9.2	4.3	6.2	2.6	1.1	45.3	57.3	9.8	18.0	0.0	0.0	0.0	0.0	0.6	0.0	2.4	1.9
4	1.1	0.2	6.4	1.0	0.6	0.6	3.6	4.7	17.5	5.6	9.6	22.0	30.2	40.9	3.7	2.3	8.8	17.7	1.7	1.5	0.1	0.0	0.0	0.0	13.7	0.9	3.1	2.4
5	6.4	0.9	11.4	2.0	1.3	2.2	1.8	3.9	36.9	13.7	2.0	10.1	9.2	22.0	7.9	11.1	11.3	29.5	0.9	0.7	0.0	0.0	0.0	0.0	8.1	0.6	2.9	3.2
6	1.0	0.3	9.5	1.1	0.6	0.2	3.9	2.8	19.9	3.9	12.9	29.2	13.5	24.1	1.3	0.7	19.2	30.6	5.5	4.2	0.0	0.2	0.0	0.1	10.8	0.6	2.8	2.0
9	3.3	0.8	1.5	0.6	0.1	0.1	0.9	1.4	24.0	13.2	10.1	23.2	2.4	5.5	0.9	0.4	19.4	30.8	0.9	19.4	0.3	0.2	0.1	0.2	2.3	0.0	3.9	4.4
10	2.9	0.4	17.9	2.8	0.6	0.4	5.9	7.5	20.4	5.5	8.5	30.0	16.8	26.7	1.0	0.6	10.0	18.7	2.8	2.4	0.0	0.2	0.0	0.0	9.8	0.7	3.5	4.0
12	9.5	0.9	25.2	1.7	1.7	1.3	7.2	5.9	17.6	4.7	7.0	26.1	6.1	10.7	0.6	0.3	7.3	20.7	2.9	21.2	0.8	1.3	0.0	0.0	0.6	0.2	3.6	3.8
13	3.3	0.9	16.1	2.7	0.6	0.4	7.3	9.2	25.1	5.9	7.3	33.9	16.7	26.2	0.7	0.4	3.9	13.0	0.5	1.3	0.2	0.6	0.1	0.0	12.8	0.6	5.4	4.8
14	15.7	4.9	29.1	7.7	0.6	2.2	3.8	13.6	23.5	5.9	10.5	27.0	10.5	18.6	0.1	0.2	1.3	5.4	0.2	0.1	0.1	0.2	0.0	0.0	0.9	0.2	3.6	4.2
Mean Percent Total Scale	5.5	1.1	14.4	2.6	0.8	0.9	4.0	5.3	23.3	7.7	7.6	23.3	11.5	20.0	2.0	1.9	14.0	25.9	7.7	7.3	0.2	0.2	0.0	0.0	6.0	0.4	3.2	3.2

*R = Real I = Ideal

Twenty-four and seven tenths percent of the teachers perceived district level structures presently as having the responsibility for making the final decisions of schoolwide scope. Fourteen and four tenths percent perceived the superintendent or other central office personnel as having the responsibility, 5.5% perceived the school board as having the responsibility, and 4.0% perceived the SPC as having the responsibility for making the final decisions of schoolwide scope.

Forty-two and four tenths percent of the teachers nominated school level structures presently as making the final decisions of schoolwide scope. Only 11.5% nominated the IIC, however, while 23.3% nominated the principal and 7.6% nominated the entire faculty as a group. More teachers perceived the unit as a group to be making the final decisions than perceived the IIC to be making the final decisions of schoolwide scope. Six percent of the teachers felt no one presently was responsible for final schoolwide decisions.

Only 9.9% of the teachers nominated district level positions or groups as the structures that should have the responsibility for making final decisions of schoolwide scope. This was 14.8% fewer than perceived district level structures presently to make such decisions. Only 2.6% nominated the superintendent or other central office personnel to be the structure that should be responsible for schoolwide decisions, 11.8% fewer than perceived the superintendent or other central office personnel presently as making the final decisions of schoolwide scope.

Fifty-one percent of the teachers nominated school level structures as the ideal structure for making final decisions of schoolwide scope. Only 20.0% nominated the IIC, however, while 23.3% nominated the entire faculty as a group. Only 7.7% nominated the principal, 15.6% fewer than perceived the principal presently to be the final decision maker on decisions of schoolwide scope. Twenty-five and nine tenths percent of the teachers nominated the unit as a group to be the ideal decision structure for decisions of schoolwide scope, 5.9% more than nominated the IIC.

One may infer from the data that the IIC was not functioning in a decision-making role in schoolwide decisions in most IGE schools. Furthermore, the IIC was not viewed as a viable decision-making structure by over 80% of the teachers in IGE schools. Teachers appeared either confused or skeptical of the decision-making responsibilities of the IIC, nominating instead faculty meetings and unit meetings, where every teacher had equal voice as the ideal decision structures for decisions of schoolwide scope. The decision-making role of the IIC listed in the IGE literature had not been realized in a large majority of IGE schools.

Set III.

7. What decision structures were utilized in making potent decisions of extra-school scope?
8. What decision structures should be utilized in making potent decisions of extra-school scope?

9. Was there a discrepancy between the real and ideal decision structures utilized in making potent decisions of extra-school scope?

The data summarizing teachers' perceptions of the real and ideal decision structures for making the final decisions of extra-school scope are presented in Table XI. It was evident from the data that the SPC was not functioning as a decision-making structure in most districts with IGE schools.

District level structures were perceived as having the final decision-making responsibility for decisions of extra-school scope by 40.8% of the teachers. Only 2.5% perceived the SPC as having such responsibility. Twenty-six and six tenths percent perceived the Superintendent or other central office personnel as responsible and 11.2% perceived school boards as responsible for final decisions of extra-school scope.

Thirty-two and two tenths percent of the teachers perceived the principal or assistant principal to have the final decision-making responsibility for decisions of extra-school scope. This was 5.7% more than nominated the superintendent. In all, school level structures were perceived by 40.3% of the teachers to have the extra-school scope final decision-making responsibility. Six and three tenths percent felt no one presently held the responsibility.

Only 20.6% of the teachers nominated district level positions or groups as the structures that should have final decision-making responsibility for decisions of extra-school scope. Eight and nine-tenths

TABLE XI

PERCENTAGE OF RESPONDENTS NOMINATING A POSITION OR A GROUP AS THE REAL AND THE IDEAL DECISION STRUCTURE FOR DECISIONS OF EXTRA SCHOOL SCOPE IN IGE SCHOOLS (N=1266)

Item *	Decision Structure: Board of Education R	I	Supt. or Other Control Office Personnel R	I	Negotiation Team R	I	SPC R	I	Principal or Assistant Principal R	I	Entire Faculty as A Group R	I	IIC R	I	Unit Leader R	I	Unit Teacher as a Group R	I	Individual Teachers R	I	Parents or Parent Advisory Group R	I	Student R	I	No One Presently Responsible R	I	No Response R	I
2	42.5	15.7	37.7	16.3	0.3	4.7	2.2	11.5	10.7	12.6	1.1	15.9	2.2	15.1	0.1	0.0	0.0	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.3	2.6
7	11.4	3.8	36.9	12.3	0.2	0.5	0.2	1.5	37.3	35.9	0.4	5.1	2.1	10.0	0.5	2.1	4.7	20.8	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	6.2	8.0
11	5.1	1.5	15.6	2.7	0.2	0.3	3.8	4.3	20.6	6.3	6.1	26.7	8.5	21.7	1.0	0.9	10.3	24.0	4.4	6.7	0.0	0.2	0.1	0.8	11.5	0.7	3.0	4.0
15	14.5	6.1	58.9	26.9	0.3	0.8	1.4	6.1	2.8	1.1	2.5	36.7	0.9	5.1	0.0	0.2	0.8	5.1	1.5	3.9	0.0	0.2	0.0	0.1	11.9	0.9	4.4	6.9
19	4.1	1.2	24.0	7.5	1.5	3.3	3.5	6.7	56.2	38.5	1.5	15.2	1.2	7.2	0.2	1.8	0.7	8.6	0.4	1.6	0.1	0.2	0.1	0.2	2.7	0.6	3.9	7.7
21	1.5	0.2	33.8	5.7	1.1	0.9	7.0	10.0	18.8	4.4	8.1	40.7	9.2	19.7	0.4	0.6	2.1	9.3	1.6	3.8	0.2	0.2	0.0	0.0	11.5	0.2	5.1	4.2
22	4.9	1.1	34.1	8.3	0.6	0.8	3.5	6.3	26.9	15.1	3.5	20.3	6.3	23.4	0.5	0.7	3.7	12.5	3.0	4.1	0.2	0.4	0.0	0.0	7.9	0.6	5.1	6.4
23	1.0	0.2	13.2	3.8	0.2	0.2	0.2	0.9	64.1	33.5	2.3	8.9	5.1	16.9	0.8	1.5	3.3	15.7	2.4	11.5	0.0	0.0	0.0	0.0	2.5	0.8	4.9	6.9
24	1.6	0.6	32.3	2.6	0.7	1.2	8.2	9.4	22.7	4.2	12.1	43.0	12.3	22.6	0.2	0.5	3.1	9.6	0.9	2.2	0.0	0.0	0.0	0.0	1.9	0.2	4.9	4.0
27	2.3	0.8	12.9	4.3	0.4	1.5	0.9	2.6	51.9	33.6	1.0	9.6	2.6	12.1	1.7	3.6	6.2	16.8	6.5	7.1	0.0	0.0	0.1	0.0	8.5	0.5	5.1	7.6
28	52.2	26.7	27.7	17.9	0.2	6.5	0.5	7.1	9.4	12.6	1.2	10.0	1.9	8.3	0.8	0.3	0.5	1.7	0.1	0.2	0.0	0.2	0.0	0.2	0.2	0.2	6.0	8.1
29	3.2	1.7	11.3	4.4	0.2	0.6	0.9	4.1	34.9	17.2	3.3	20.8	4.8	15.3	0.1	0.2	2.1	7.1	1.0	0.9	9.8	17.9	0.1	0.0	23.1	1.6	5.2	8.1
30	0.8	0.4	8.0	2.4	0.2	0.1	0.0	0.5	63.0	28.0	3.9	14.7	1.3	5.0	0.2	0.2	16.7	40.9	1.5	2.4	0.1	0.1	0.0	0.0	0.4	0.0	3.9	5.4
Mean Percent Total Scale	11.2	4.6	26.6	8.9	0.5	1.6	2.5	5.5	32.3	18.7	3.5	20.6	4.5	14.0	0.5	1.0	4.2	13.6	2.6	3.4	0.8	1.5	0.0	0.1	6.3	0.5	4.6	6.1

*R = Real I = Ideal

percent nominated the superintendent or other central office personnel, 17.7% fewer than perceived that group to hold the responsibility presently. Four and six tenths percent nominated the school board, 6.6% fewer than perceived the school board to hold the responsibility presently. Only 5.5% of the teachers nominated the SPC as the structure that should have the final decision-making responsibility for decisions of extra-school scope.

Eighteen and seven tenths percent of the teachers nominated the principal or assistant principal, 13.6% fewer than felt those positions presently held the extra-school scope decision-making responsibility. Twenty and six tenths percent nominated the entire faculty as a group and 14.0% nominated the IIC. In all, 53.3% nominated school level structures as the structures that should make the final decisions of extra-school scope. This was 32.7% more than nominated district level structures.

Thirteen and six tenths percent of the teachers nominated the unit as a group as the structure that should be responsible for final decisions of extra-school scope. This relatively high percentage was a result primarily of teachers' responses to three items: Item 30, "the selection of unit leaders"; item 11, "the relationship of art, music and physical education to the instructional program"; and item 7, "the selection of new teachers for the school." All of these items have immediate and potent impact on the operations of the unit. The decisions are of extra-school scope, however, and to give final decision-making responsibility to the units may be inappropriate.

Large discrepancies in teachers' perceptions of the real and ideal decision structures were found on five items of extra-school scope: item 2, "the amount of money designated for implementation of new programs within the school;" item 15, "the procedures to be utilized in evaluating a principal's performance;" item 21, "the criteria to be utilized in evaluating preservice and inservice programs;" item 22, "the nature and extent of consultant help from outside the school;" and item 24, "the topics for the inservice programs." On each of these items, over 20 percent of the teachers desired a shift away from district level structures to school level structures rather than to teachers being involved on a district level through the SPC.

The concept of the SPC as a structure through which teachers may be involved in decisions of extra-school scope either was not understood by or had not been accepted by IGE teachers. IGE teachers desired a shift away from district level structures to school level structures to make decisions of extra-school scope. The school level structure nominated by the highest percentage of teachers was the entire faculty as a group. The new structures intended to provide interlevel decision-making participation by the IGE model--the IIC and the SPC--were not perceived to be functioning and were not perceived to be the ideal structures for decisions of extra-school scope.

The questions in Set I, Set II and Set III related to teachers' perceptions of the real and ideal decisions structures utilized in IGE schools. The questions in Set IV, Set V and Set VI relate to teachers' perceptions of their involvement in the decision-making

process regardless of the structure perceived as having final decision-making responsibility.

Set IV.

10. How much involvement did teachers have in making potent decisions of unit and subunit scope?
11. How much involvement should teachers have in making potent decisions of unit and subunit scope?
12. Was there a discrepancy between the real and ideal level of involvement of teachers in making potent decisions of unit and subunit scope?

The data summarizing teachers' perceptions of their real and ideal levels of involvement in the decision-making process regarding potent decisions of unit and subunit scope in IGE schools are presented in Table XII. It may be inferred from the data that teachers had a moderately high level of involvement but desired an even higher level of involvement in the decision-making process utilized to make decisions of unit and subunit scope.

The mean score representing teachers' perceptions of their present level of involvement in the decision-making process utilized to make decisions of unit and subunit scope was 3.76 on a 5 point Likert scale, where "1" represented "very little involvement" and "5" represented "very much involvement". The highest level of involvement was perceived on items 16 and 17, "the groupings to be utilized for instruction (one-to-one, small group, etc.)" and "The procedures to be utilized in pre-assessing an individual student's level of achievement, learning style, and level of motivation."

TABLE XII

MEAN SCORES ON A 5-POINT LIKERT SCALE OF TEACHERS' PERCEPTIONS OF REAL AND IDEAL LEVELS OF INVOLVEMENT IN THE DECISION-MAKING PROCESS REGARDING DECISIONS OF UNIT AND SUBUNIT SCOPE IN IGE SCHOOLS (N=1266)

Item	Mean Score Real Involvement	Mean Score Ideal Involvement	Discrepancy
8	3.596	4.272	0.676
16	4.217	4.547	0.330
17	4.002	4.472	0.470
18	3.890	4.958	0.568
20	3.252	4.214	0.962
25	3.400	4.204	0.804
26	3.970	4.423	0.453
Total Scale	3.761	4.370	0.609

The mean score of teachers' perceptions of their ideal level of involvement was 4.37. This was 0.61 more than their perceived real level of involvement and showed a desire to be highly involved in decisions of unit and subunit scope. Teachers perceived the largest discrepancy between real and ideal levels of involvement on two items, item 20, "the curricular area to be individualized first, second, etc." and item 25, "the area(s) in which unit teachers should specialize."

It would appear that teachers had moderately high involvement in making decisions of unit and subunit scope. This complements the data relating to the questions in Set I which showed unit structures were utilized for decisions of unit and subunit scope. Analyzing the data of Set I and Set IV, one may infer that unit structures were functioning appropriately to provide relatively high levels of involvement of teachers in the decision-making process regarding decisions of unit and subunit scope. Furthermore, teachers desired even higher levels of involvement through the structure of the unit as a group.

Set V

13. How much involvement did teachers have in making potent decisions of schoolwide scope?
14. How much involvement should teachers have in making potent decisions of schoolwide scope?
15. Was there a discrepancy between the real and ideal levels of involvement of teachers in making potent decisions of schoolwide scope?

The data representing teachers' perceptions of their real and ideal levels of involvement in the decision-making process regarding decisions of schoolwide scope in IGE schools are presented in Table XIII. The data indicate that teachers perceived themselves to have some involvement but desired greatly increased involvement in the decision-making process at the schoolwide level.

TABLE XIII

MEAN SCORES ON A 5-POINT LIKERT SCALE OF TEACHERS' PERCEPTIONS OF REAL AND IDEAL LEVELS OF INVOLVEMENT IN THE DECISION-MAKING PROCESS REGARDING DECISIONS OF SCHOOLWIDE SCOPE IN IGE SCHOOLS (N=1266)

Item	Mean Score Real Involvement	Mean Score Ideal Involvement	Discrepancy
1	3.482	4.396	0.914
3	3.934	4.475	0.541
4	2.966	4.105	0.139
5	3.248	3.867	0.619
6	3.028	4.175	1.147
9	3.736	4.356	0.620
10	2.699	4.039	1.340
12	2.905	4.294	1.389
13	2.302	3.953	1.651
14	2.352	3.938	1.586
Total Scale	3.065	4.160	1.095

The mean score of teachers' perceptions of their present level of involvement was 3.06, very near the "some involvement" level of 3.0 on the scale. Teachers perceived themselves to be highly involved in the decision-making process on two items of the schoolwide

scale, item 3, "the nature and duration of specific instructional activities" and item 9, "the methods used to modify student conduct." Teachers perceived themselves to have little involvement on two items of schoolwide scope, item 13, "the criteria to be utilized in evaluating the effectiveness of IGE within a school" and item 14, "the changes to be made in the school-wide organizational pattern."

The mean score of teachers' perceptions of the level of involvement they should have in the process of making decisions of schoolwide scope was 4.16, above the "much involvement" level of 4.0. This was 1.09 points above the perceived level of involvement presently. Discrepancies of over 1.0 point in the mean scores were found on six items: item 4, "the coordination of curriculum across units within a school;" item 6, "the procedures to be utilized in evaluating instructional materials within a school;" item 10, "the criteria to be utilized in evaluating instructional programs within the school;" item 12, "The number and nature of parent-teacher conferences;" item 13, "the criteria to be utilized in evaluating the effectiveness of IGE within a school;" and item 14, "the changes to be made in the schoolwide organizational pattern."

Analyzing the data from Set II and Set V, one may infer that while IGE teachers perceived themselves to be somewhat involved in schoolwide decisions, they desired greatly increased involvement. The teachers were split, however, as to which structure should be utilized to increase teacher decision-making involvement regarding schoolwide decisions. Although many teachers nominated the IIC, more

teachers nominated the entire faculty as a group and the unit as a group.

Set VI

16. How much involvement did teachers have in making potent decisions of extra-school scope?
17. How much involvement should teachers have in making potent decisions of extra-school scope?
18. Was there a discrepancy between the real and ideal levels of involvement of teachers in making potent decisions of extra-school scope?

The data representing teachers' perceptions of their real and ideal levels of involvement in the decision-making process regarding decisions of extra-school scope are presented in Table XIV. The data indicated that teachers had little involvement but desired moderately high involvement in the process of making potent decisions of extra-school scope.

The mean score of teachers' perceptions of their present level of involvement in the decision-making process regarding decisions of extra-school scope was 2.02, very near the 2.0 "little involvement" indicator utilized on the Likert scale. Teachers perceived themselves to have very little involvement in item 15, deciding "the procedures to be utilized in evaluating a principal's performance." Additionally, teachers perceived themselves to have less than little involvement on five other items: item 2, "the amount of money designated for implementation of new programs within the school;" item 7, "The selection

TABLE XIV

MEAN SCORES ON A 5-POINT LIKERT SCALE OF TEACHERS' PERCEPTIONS OF REAL AND IDEAL LEVELS OF INVOLVEMENT IN THE DECISION-MAKING PROCESS REGARDING DECISIONS OF EXTRA-SCHOOL SCOPE IN IGE SCHOOLS (N=1266)

Item	Mean Scores Real Involvement	Mean Scores Ideal Involvement	Discrepancy
2	1.852	3.593	1.741
7	2.408	3.096	1.398
11	2.408	3.922	1.514
15	1.383	3.435	2.052
19	1.838	3.504	1.666
21	2.170	3.869	1.699
22	2.107	3.661	1.554
23	2.157	3.600	1.443
24	2.348	4.063	1.715
27	2.264	3.555	1.291
28	1.701	3.199	1.498
29	1.961	3.288	1.327
30	2.356	3.746	1.390
Total Scale	2.019	3.579	1.561

of new teachers for the school;" item 19, "The procedures to be utilized in evaluating a teacher's performance;" item 28, "The budget for the school;" and item 29, "The extent of involvement of parent advisory groups in the programs of the school."

The mean score of teachers' perceptions of the level of involvement they should have in the process of making decisions of extra-school scope was 3.58, a moderately high level of involvement. The items on which teachers desired the highest decision involvement were: item 24, "the topics for the inservice program;" item 11, "the relationship of art, music and physical education to the instructional program;" item 21, "the criteria to be utilized in evaluating pre-service and inservice programs;" and item 30, "the selection of unit leaders."

The discrepancy between teachers' perceptions of their real and ideal levels of decision involvement in decisions of extra-school scope was 1.56, the largest discrepancy score of the three scales. The largest discrepancy was on item 15, "procedures for evaluating principals." Major discrepancies between real and ideal levels of decision involvement were found on all items of the scale, the greatest being on items 2, the money for new programs, 24, the inservice topics, 21, the criteria for evaluating inservice, and 19, procedures for evaluating teachers.

One may infer from the combined data of Set III and Set IV that IGE teachers desired a greatly increased level of involvement in the decision-making process regarding potent decisions of extra-school

scope. As in the case of decisions of schoolwide scope, however, teachers were confused as to which structure should be utilized to gain the increased involvement. Unit level, school level and district level structures were all nominated as appropriate structures. The SPC, the structure prescribed in the IGE literature, was not seen as the structure through which teachers could increase their level of decision involvement.

The descriptive data presented in Sets I through VI lead to several conclusions regarding the role of various structures and the level of involvement of teachers in the decision-making process of IGE schools. These conclusions have considerable import to agencies facilitating and researching the implementation of IGE. They are presented in the first section of Chapter IV.

Decision Involvement and I and R Unit Effectiveness

The final phase of the study was to analyze data that would provide initial evidence regarding the construct validity of the Decision Involvement Analysis Instrument. To accomplish this, eight hypotheses were tested:

H_1 There is no relationship at the .05 level of significance between the perceived level of real involvement in the decision-making process regarding decisions of unit-subunit scope and the perceived effectiveness of I and R unit operations in IGE schools.

H_2 There is no relationship at the .05 level of significance between the perceived level of real involvement in the decision-making process regarding decisions of schoolwide scope and the perceived effectiveness of I and R unit operations in IGE schools.

H_3 There is no relationship at the .05 level of significance between the perceived level of real involvement in the decision-making process regarding decisions of extra-school scope and perceived effectiveness of I and R unit operations in IGE schools.

H_4 There is no relationship at the .05 level of significance between the perceived level of real involvement in the decision-making process and perceived effectiveness of I and R unit operations in IGE schools.

H_5 There is no relationship at the .05 level of significance between the discrepancy of perceived levels of real and ideal involvement in the decision-making process regarding decisions of unit-subunit scope and perceived effectiveness of I and R unit operations in IGE schools.

H_6 There is no relationship at the .05 level of significance between the discrepancy of perceived levels of real and ideal involvement in the decision-making process regarding decisions of schoolwide scope and perceived effectiveness of I and R unit operations in IGE schools.

H_7 There is no relationship at the .05 level of significance between the discrepancy of perceived levels of real and ideal involvement

in the decision-making process regarding decisions of extra-school scope and perceived effectiveness of I and R unit operations in IGE schools.

H_8 There is no relationship at the .05 level of significance between the discrepancy of perceived levels of real and ideal involvement in the decision-making process and the perceived effectiveness of I and R unit operations in IGE schools.

The school was the unit of analysis utilized to test the hypotheses. To obtain a school's real and ideal decision involvement score for each of the scales, the mean score of responses to each scale was computed for teachers from each school. To obtain a school's real and ideal decision involvement score for the total instrument, the mean of a school's scores for each scale was computed with each scale score receiving equal weight. A school's discrepancy scores were computed by subtracting the real scores from the ideal scores for each scale and for the total instrument. Eight scores were computed to represent the teachers' involvement in the decision-making process in each school:

1. perceived real level of involvement in the process of making decisions of unit-subunit scope.
2. perceived real level of involvement in the process of making decisions of schoolwide scope.
3. perceived real level of involvement in the process of making decisions of extra-school scope.

4. perceived real level of involvement in the decision-making process.
5. discrepancy between perceived real and ideal levels of involvement in the process of making decisions of unit-subunit scope.
6. discrepancy between perceived real and ideal levels of involvement in the process of making decisions of school-wide scope.
7. discrepancy between perceived real and ideal levels of involvement in the process of making decisions of extra-school scope.
8. discrepancy between perceived real and ideal levels of involvement in the decision-making process.

These eight became the independent variables. The dependent variable was the perceived effectiveness of I and R unit operations. A school's score for effectiveness of I and R unit operations was determined by computing the mean of responses of teachers from a school to the I and R Unit Operations Questionnaire.[65]

The correlation of each independent variable and the dependent variable was computed through use of PROGRAM WISE*STAT.DISTX.[66] The correlation matrix computed is presented in Table XIV. Extracting the appropriate data from the matrix, the following conclusions were

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[65]Nancy A. Evers, op. cit.

[66]Dennis W. Spuck, op. cit.

TABLE XV

MEANS, STANDARD DEVIATIONS AND CORRELATION MATRIX OF PERCEIVED REAL AND DISCREPANCIES BETWEEN PERCEIVED REAL AND IDEAL LEVELS OF INVOLVEMENT IN DECISION-MAKING PROCESS AND PERCEIVED EFFECTIVENESS OF I AND R UNIT OPERATIONS IN IGE SCHOOLS (N=77)

VARIABLE	MEAN	STANDARD DEVIATION	1	2	3	4	5	6	7	8	9
1. Real Unit-Subnit	20.30	3.949	1.000								
2. Real School-Wide	29.92	4.349	.789	1.000							
3. Real Extra-School	37.48	4.685	.708	.796	1.000						
4. Real Decision Involvement	29.27	3.977	.896	.939	.917	1.000					
5. Discrepancy Unit-Subunit	15.45	3.597	-.684	-.586	-.379	-.590	1.000				
6. Discrepancy Schoolwide	11.65	3.672	-.666	-.879	-.606	-.781	.761	1.000			
7. Discrepancy Extra-School	6.07	2.954	-.693	-.742	-.852	-.837	.621	.747	1.000		
8. Discrepancy Decision Involvement	21.16	3.432	-.578	-.792	-.539	-.661	.720	.822	.732	1.000	
9. I and R Unit Operations	24.41	2.946	-.222	-.311	-.326	-.314	.176	.345	.341	.291	1.000

drawn regarding each hypothesis:

H_1 The correlation coefficient between teachers' perceived real level of involvement in the process of making decisions of unit and subunit scope and perceived effectiveness of I and R unit operations was -.222 with a significance level of .052. The correlation coefficient was not statistically significant at the .05 level and the null hypothesis was not rejected.

H_2 The correlation coefficient between teachers' perceived real level of involvement in the process of making decisions of schoolwide scope and perceived effectiveness of I and R unit operations was -.311 with a significance level of .006. The correlation coefficient was statistically significant and the null hypothesis was rejected. Since only 9.6% of the variance of one variable was explained by the other, the relationship may be of limited importance.

H_3 The correlation coefficient between teachers' perceived real level of involvement in the process of making decisions of extra-school scope and perceived effectiveness of I and R unit operations was -.326 with a significance level of .004. Consequently, the null hypotheses was rejected. The amount of variance of one variable explained by the other was minimal, however, limiting the importance of the relationship.

H_4 The correlation coefficient between teachers' perceived real level of involvement in the decision-making process and perceived effectiveness of I and R unit operations was -.314

with a significance level of .005. The correlation coefficient was statistically significant and the null hypothesis was rejected. The amount of variance of one variable explained by the other was minimal, however, limiting the importance of the relationship.

H_5 The correlation coefficient between the discrepancy of teachers' perceived real and ideal levels of involvement in the process of making decisions of unit and subunit scope and perceived effectiveness of I and R unit operations was .170 with a significance level of .125. The null hypothesis was not rejected.

H_6 The correlation coefficient between the discrepancy of teachers' perceived real and ideal levels of involvement in the process of making decisions of schoolwide scope and perceived effectiveness of I and R unit operations was .345 with a significance level of .002. The correlation coefficient was statistically significant and the null hypothesis was rejected. The amount of variance of one variable explained by the other was minimal, however, limiting the importance of the relationship.

H_7 The correlation coefficient between the discrepancy of teachers' perceived real and ideal levels of involvement in the process of making decisions of extra-school scope and perceived effectiveness of I and R unit operations was .341 with a significance level of .002. The correlation coefficient was statistically significant and the null hypothesis was rejected.

The amount of variance of one variable explained by the other variable was minimal, however, limiting the importance of the relationship.

H_8 The correlation coefficient between the discrepancy of teachers' perceived real and ideal levels of involvement in the decision-making process and perceived effectiveness of I and R unit operations was .291 with a significance level of .010. The correlation coefficient was statistically significant and the null hypothesis was rejected. The amount of variance of one variable explained by the other was minimal, however, limiting the importance of the relationship.

Six of the correlation coefficients were of sufficient strength to reject the null hypotheses. The tendency of the relationships was negative: The more involvement teachers' perceived themselves to have in the decision-making process, the less effective they perceived their I and R unit operations to be; the larger the discrepancy between teachers' perceived real and ideal levels of involvement in the decision-making process, the more effective they perceived their I and R units to be. These results should be utilized with extreme caution, however. None of the relationships explained more than 10% of the variance of the variables. Normally, initial studies in an area of research require correlation coefficients of .20 or higher to warrant further investigation.[67] The correlation

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[67] Fred N. Kerlinger, op. cit., p. 201.

coefficients in this study were in the .20 to .30 range. If the negative relationships are found to be of significant strength in future studies, however, the basic concept embodied in the IGE model of increasing decision-making responsibilities of participatory decision structures appropriate to the scope of the decision would be suspect. Several possible explanations for the tendency toward negative relationships are discussed in Chapter IV.

CHAPTER IV

CONCLUSIONS AND RECOMMENDATIONS

This chapter begins with a presentation of conclusions based on the descriptive data of the study. Next, conclusions concerning the relationship between involvement in the decision-making process and I and R unit effectiveness are discussed. Then, conclusions regarding the reliability and validity of the Decision Involvement Analysis Instrument are presented. The chapter concludes with recommendations for future research and development activities related to the decision-making process in IGE schools.

Conclusions Based on Descriptive Data

The descriptive data of the study led to conclusions in three areas: 1) the degree to which various decision structures were perceived as functioning in IGE schools; 2) the perceived real and ideal levels of involvement of teachers in the decision-making process in IGE schools; and 3) the various decision structures teachers perceived as being ideal for assuming increased decision-making responsibility.

Functioning of Decision Structures

Five major conclusions were drawn concerning the functioning of various decision structures in IGE schools.

> Conclusion 1. There was little consistency among IGE schools in the structures utilized to make decisions.

To describe a school as an IGE school apparently would not ensure that the structures utilized to make decisions would be the same structures utilized in other IGE schools. The greatest consistency was found in decisions of unit and subunit scope. Even here, only 44.6% of the teachers perceived the same structure, the unit as a group, as making decisions of unit and subunit scope. In decisions of schoolwide and extra-school scope, only 30% of the teachers perceived the same structure as making the final decisions.

The results of this study indicated that research examining the relationship of involvement in decision making in IGE and variables such as teacher morale or I and R unit operations could not attribute increased involvement of teachers in decision making to the structures of the IGE model unless those structures were verified as utilized in making the decisions. The increased involvement in decision making could have been obtained through structures utilized in non-IGE schools.

> Conclusion 2. Group decision structures with peer membership were functioning much more fully than were group decision structures with membership from more than one level of the hierarchy.

The unit was the only decision structure with group membership that was perceived to be making final decisions of any scope. The IIC, the SPC and negotiating teams were perceived as making final decisions by fewer than 10% of the teachers. Furthermore, more

teachers nominated group structures with peer membership than nominated individual positions or groups with inter-level membership as the ideal decision structures. The participatory decision structures with membership from more than one level of the hierarchy were not functioning in a decision-making role in the majority of IGE schools.

> Conclusion 3. IGE principals were perceived as having considerably more decision-making responsibility than was considered ideal on decisions of schoolwide and extra-school scope.

The principal was perceived to be making the final decisions of schoolwide and extra-school scope by 15% more teachers than nominated the principal as the position or group that should be making the final decisions. Over twice as many teachers perceived the principal to be making final decisions than perceived the IIC to be making final decisions of schoolwide scope. Principals were not utilizing the IIC in a decision-making role.

> Conclusion 4. The majority of decisions of schoolwide and extra-school scope were not perceived as being made in decision structures of the corresponding level of the organization.

Over 50 percent of the teachers perceived decision structures other than those of the corresponding level of the organization as responsible for making decisions of schoolwide and extra-school scope. If the teachers' perceptions were accurate, most school districts with schools implementing IGE were not following the IGE model concerning the decision-making roles of school level and district level structures.

> Conclusion 5. The unit leaders were not perceived as decision makers.

Less than 5% of the teachers perceived unit leaders to be making final decisions of any scope. In addition, less than 5% of the teachers nominated the unit leader position as the one that should be responsible for making final decisions of any scope. At least in terms of decision making, unit leaders were not perceived as having greater responsibility than their teaching peers. This indicated that the unit leader was not perceived as an assistant administrator.

Teacher Involvement in Decision Making

Two major conclusions were reached concerning the perceived real and ideal levels of involvement of teachers in the decision-making process in IGE schools.

> Conclusion 6. IGE teachers perceived themselves to have moderately high involvement in the process of making potent decisions of unit and subunit scope, some involvement in the process of making potent decisions of schoolwide scope, and little involvement in the process of making potent decisions of extra-school scope.

The lack of involvement of school level and district level participatory structures in making decisions of schoolwide and extra-school scope was reflected in the teachers' perceptions of relatively low levels of involvement in making those decisions. Increased utilization of the IIC and the SPC would be a major step toward increased levels of involvement of teachers in making potent decisions of schoolwide and extra-school scope. The moderately high involvement of unit level structures in making decisions of unit and subunit

scope was reflected in the teachers' perceived level of involvement in the process of making potent decisions of unit and subunit scope. The involvement of peers in making potent decisions of appropriate scope was occurring through the unit structure.

> Conclusion 7. IGE teachers desired greater involvement in the process of making potent decisions, especially decisions of schoolwide and extra-school scope.

IGE teachers desired greater involvement in the decision-making process on every decision content item listed on the Decision Involvement Analysis Instrument. Evidently, teachers felt increased involvement in the process of making potent decisions was worthwhile regardless of the scope of the decision.

Decision Structures Perceived As Ideal

Two major conclusions were drawn concerning teachers' perceptions of the decision structures that should be utilized in making decisions in IGE schools.

> Conclusion 8. The unit structure was accepted by IGE teachers as the decision structure that should be responsible for making potent decisions of unit and subunit scope.

The unit was nominated by nearly 60% of the IGE teachers as the ideal structure for making potent decisions of unit and subunit scope. Only 13% of the teachers felt the individual teacher should be responsible. The loss of individual teacher autonomy as teachers moved into unit teaching evidently was accepted and shared decision-making among peers was considered worthwhile.

> Conclusion 9. IGE teachers had not accepted the IIC or the SPC as structures that should be responsible for making potent decisions of schoolwide and extra-school scope.

Although the IIC was nominated by 20% of the teachers as the structure that should be responsible for making potent decisions of schoolwide scope, nearly 50% nominated the entire faculty as a group or the unit as a group. The unit and the entire faculty as groups were nominated as the ideal structures for making potent decisions of extra-school scope by seven times as many teachers as nominated the SPC. IGE teachers appeared confused as to the decision-making role of various structures. This could stem from a lack of understanding by the teachers of the scope of decision responsibility of each structure or from experiences which have made them skeptical of the structures as means of involving teachers in the decision-making process.

Conclusions Based on Correlational Data

Two conclusions were made based on data utilized to test the relationship between involvement of teachers in decision making and the effectiveness of I and R unit operations.

> Conclusion 10. Slightly negative relationships were found between the levels of involvement of teachers in the process of making potent decisions and the effectiveness of I and R unit operations in IGE schools.

Teachers' levels of involvement in decision making and the effectiveness of I and R unit operations were found to have significant but minimal negative correlation. Although the relationship was

very slight, the negative tendency of the correlation could signal a problem area in the IGE model. If research finds increased involvement in the process of making potent decisions related to less effective I and R unit operations, the organizational component of the IGE model providing for participatory decision making would need to be re-examined.

Several explanations for the negative tendency are possible. The interviews and observations of the first phase of the study support two different explanations. Time is the key element in the first explanation. Nearly every IGE teacher interviewed said that teaching in a unit required more time than was required for self contained teaching. More time was needed for lesson preparation, management tasks, and communication among unit members and with parents. Many of the teachers came to school early and remained well beyond the contract day in order to accomplish all that was needed for effective unit operations.

Add involvement in decision-making to the demands on teacher time and something must suffer. The decision-making process utilized to make potent decisions could be expected to be time consuming. Teachers would have to spend time meeting with task forces, with their units, with parent advisory groups, with the IIC, and with the entire faculty to ensure adequate involvement in the decision-making process for most potent decisions of schoolwide scope. For decisions of extra-school scope, additional meetings would be required at the district level and with task forces involving teachers from other schools.

Although these forms of involvement were considered worthwhile by the teachers interviewed and the data of the study indicated that teachers want more involvement in the decision-making process, such involvement requires time outside of the unit's operations. As more time is given to schoolwide and extra-school matters, the time needed for keeping the operations of the unit at very effective levels may not be available. As one increases, the other must decrease.

A second possible explanation supported by interview data is related to the scope of teachers' involvement. Involvement in decision making beyond the scope of the unit usually gave teachers continuing access to alternative ideas and materials that teachers involved only at the unit level did not have. For instance, three of the teachers interviewed had served on schoolwide task forces to develop objectives and materials for individualized math programs. In their task force work, they had met with representatives of publishers of individualized programs, with teachers from other units with varying ideas of how to individualize math, and with central office curriculum specialists. Each of these contacts probably provided new insights into the ways math could be individualized and altered the teachers' perceptions of the adequacy of their unit's present math program. The information gained through increased involvement in the process of making potent decisions may have altered teachers perceptions of the effectiveness of their unit. Consequently, even though their unit may have been rated "very effective" in comparison to other units, the increased awareness of the teachers gained through higher levels of involvement

in the decision-making process may have led to more moderate ratings of their own effectiveness.

If the slight negative tendency of the correlation of involvement in decision making and I and R unit effectiveness found in this study is substantiated in future studies, the effects of increased time demands and increased awareness of alternatives would be worth examining.

> Conclusion 11. Slightly positive relationships were found between the discrepancy of perceived real and ideal levels of involvement in the process of making potent decisions and the effectiveness of I and R unit operations in IGE schools.

The discrepancy of teachers' perceived real and ideal levels of involvement in decision making and perceived effectiveness of I and R unit operations in IGE schools were found to have significant but minimal positive correlation. As discussed in Conclusion 10, the explanations for the relationship, if substantiated in future research, may relate to increased demands upon teachers' time and increased awareness of alternatives through teachers' involvement in the decision-making process.

Conclusions Regarding the Reliability and Validity of the Decision Involvement Analysis Instrument

Three conclusions were reached concerning the reliability and validity of the final version Decision Involvement Analysis Instrument.

> Conclusion 12. The scales and the total Decision Involvement Analysis Instrument were of adequate reliability for research purposes.

The alpha coefficients of the scales and the total instrument ranged from .7812 to .8954, all above the levels required for general research. School districts could also be confident that the instrument would provide reliable data describing the involvement of IGE teachers in decision making.

> Conclusion 13. The Decision Involvement Analysis Instrument had content validity.

The procedures utilized in the first two phases of the study ensured careful attention to the development of an instrument that accurately represented the content of potent decisions in IGE schools, the decision structures utilized in IGE schools, and the levels of involvement of teachers in the decision-making process. Actual events occurring in the decision-making process in IGE schools were accurately represented on the instrument.

> Conclusion 14. Little evidence concerning the construct validity of the Decision Involvement Analysis Instrument was provided by the study.

The data concerning the correlation between teachers' involvement in decision making and I and R unit effectiveness were inconclusive. Future studies utilizing the Decision Involvement Analysis Instrument will be needed to determine if the constructs embodied in the instrument react in the expected manner with other constructs.

The Decision Involvement Analysis Instrument did represent constructs found in the decision-making literature. The instrument accounted for the three dimensions of involvement in decision making

conceptualized by Lipham.[64] The content of decisions was accounted for by the decision content items, the extent of involvement was accounted for by the Likert scale response format, and the personnel involved was accounted for by the format of the questions and by the format of the response set for decision structure. The detail of Lipham's[65] conceptualization of the decision-making process was collapsed into the phrase "the decision-making process" in the third and fourth questions asked about each decision content item.

Three of the four descriptors utilized by Dale[66] to define decentralization were accounted for by the instrument: The potency of the decisions, the scope of the decisions, and the frequency of involvement. The amount of checking required by superiors was not accounted for on the instrument, although the levels of the hierarchy were represented in the response set for questions regarding decision structures. Consequently, the instrument could be utilized to gather data appropriate for studies of centralization of decision making based on Dale's definition. The instrument represents only potent decision content items and would not be sensitive to the possible over-involvement of teachers in the process of making trivial decisions, such as may be included in studies based on Hage's[67]

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[64] James M. Lipham, op. cit.

[65] James M. Lipham, op. cit.

[66] Ernest Dale, op. cit.

[67] Jerald Hage, op. cit.

definition of centralization.

Future studies utilizing the Decision Involvement Analysis Instrument not only would provide evidence of the construct validity of the instrument, but also would provide evidence regarding the adequacy of Lipham's model of the dimensions of decision making, Lipham's model of the decision-making process, and Dale's definition of centralization of decision making. This study provided an instrument which accounted for the major elements of Lipham's models and Dale's definition, but provided no evidence as to the adequacy with which it measured such constructs.

Recommendations for Future Research and Development Activities

Five recommendations were made for future research and development activities concerning the decision-making process in IGE schools.

> Recommendation 1. The relationship between teacher involvement in the decision-making process regarding decisions of unit-subunit scope, schoolwide scope, and extra-school scope and the effectiveness of I and R unit operations in IGE schools need to be examined further.

The IGE model prescribes both teaching in multiaged units and involvement in the decision-making process through participatory structures of appropriate scope. If both are elements necessary for providing an improved learning environment and learning program for students, but are found to be negatively related, the suspected causes for the negative relationship should be examined and appropriate modifications developed. These modifications may range from

minor factors, such as reducing the time demands placed upon teachers, to major factors, such as restructuring the role of the IIC primarily to handle potent decisions of schoolwide scope.

> Recommendation 2. The relationship between teacher involvement in the decision-making process and student attitudes and student achievement in IGE schools needs to be examined.

Reliable instrumentation validly representing the decision process in IGE schools is now available. The eventual objective of all elements in the IGE model is to provide improved student cognitive and affective behaviors. The hypothesized relationship between teacher involvement in decision making of appropriate scope and improved student cognitive and affective behavior should be tested now that instrumentation is available.

> Recommendation 3. The decision content items of the Decision Involvement Analysis Instrument should be reworded to clarify the scope of the decision in question.

The apparent confusion of a few of the decision content items probably stem from varying interpretations by respondents of the scope of the decision. Once clarified, little confusion would exist and the reliability and validity of the scales would be strengthened even further. Item 2 should be reworded to state, "The amount of money budgeted for implementation of new programs in schools throughout the district." Item 14 should state, "The number and age-span of students to be included within each unit." Item 13 should be reworded to state, "The methods to be utilized in evaluating the effects of IGE upon students within a school. Item 8 should be

be restated as, "The duties and responsibilities of teachers in the learning program of the unit." Item 3 should become part of the unit-subunit scale and restated, "The instructional activities in which each child should be involved." Finally, item 11 should be reworded to state, "the number of art, music, and physical education specialists to be provided by the district."

> Recommendation 4. Materials and programs should be developed to provide principals and unit leaders of IGE schools the opportunity to improve their utilization of the IIC as a decision-making structure.

Many IICs are not being utilized to make potent schoolwide decisions and, consequently, many IGE teachers are not as involved in the decision-making process as they would like to be. Clarification of the decision-making role of the IIC may be needed. Programs and materials training principals and unit leaders in the role of the IIC and in strategies and procedures that make the IIC effective in that role would be of great help.

> Recommendation 5. School districts with schools implementing IGE need to re-examine the district level commitment to involving teachers in decisions of extra-school scope.

The IGE model provides for support for teachers from their central offices to implement IGE. The central offices need to communicate with IGE teachers effectively and to involve them in decisions directly affecting the IGE school's operations. The IGE model provides for this communication and involvement in decision making through the SPC. Most districts have not effectively utilized

the SPC and should initiate or revitalize district level implementation commitments to IGE.

The potential of the IGE model will not be realized until the decision-making structures designed to provide participatory decision-making with adequate vertical and horizontal communication are more fully implemented. This study indicated that IGE teachers were committed to the increased levels of involvement in the decision-making process the model prescribed for them. Principals and district level personnel apparently have not had the skills required to move the teacher commitment into action in the majority of schools and districts implementing IGE. Personnel throughout the facilitative network for IGE, from the local education agency to the Wisconsin R and D Center, need to direct a considerable portion of their research, development, and implementation efforts toward improving the functioning of the decision structures and to capitalize on the commitment of IGE teachers to shared decision-making.

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APPENDICES

APPENDIX A

INTERVIEW SCHEDULE UTILIZED TO INVESTIGATE DECISION CONTENT, DECISION STRUCTURES, AND DECISION PROCESS IN IGE SCHOOLS

INTERVIEW SCHEDULE

1. How has your participation in this school's decision making changed from what it used to be?

   1A) What decisions are you involved in now that you never used to be?

   1B) What decisions did you use to make that you feel you can no longer make?

   1C) Are there any decisions that you would like to be involved in presently that you are not?

   1D) What decisions are you presently involved in that you wish you didn't have to be?

2. If you had to pinpoint the person or group that makes the most important decisions for this school, who would it be?

   2A) What decision does (she/he, this group) make?

   2B) How can you affect these decisions?

   2C) How do other people affect these decisions?

   2D) How do other people affect you in your decisions?

3. Who presently is not involved in the decision process of this school as much as they ought to be? How would you involve them?

4. What decisions need to be made in this school which are not being made? Who should be involved in making these decisions?

5. What is the most important decision that was made in this school this year in which you were involved?

   5A) For yourself, how did you come to your final position on this decision; that is, can you set out in order the things you thought about and did?

   5B) If this decision were to be made over again, what should be done differently?

6. You are involved in many other decisions in addition to this one. What is the usual way in which you come to your position; that is, can you set out in order the things you usually do in arriving at a decision?

APPENDIX B

SAMPLE RATING FORM UTILIZED BY PANEL OF EXPERTS TO DETERMINE POTENCY OF DECISION CONTENT ITEMS

PANEL OF EXPERTS
Rating Form--Potency I
Instructional Program
2/26/74

How much importance do you attach to the decision on . . .

		IMPORTANCE				
		Very Little	Little	Some	Much	Very Much
1.	The needs and characteristics of individual children	1	2	3	4	5
2.	The use of computer-assisted, programmed instruction, and sets of curriculum materials	1	2	3	4	5
3.	The type of stimulation and guidance provided each child	1	2	3	4	5
4.	The building-wide instructional improvement effort	1	2	3	4	5
5.	The nature and content of pre-school programs	1	2	3	4	5
6.	The nature and number of field trips	1	2	3	4	5
7.	The subject areas that will be "individualized" --reading, math, etc.	1	2	3	4	5
8.	The speed of changes in curriculum	1	2	3	4	5
9.	The advancement of children from one unit to another	1	2	3	4	5
10.	The objectives to be mastered by each child	1	2	3	4	5
11.	The supervision of students on the playground	1	2	3	4	5
12.	The assignment of instructional objectives and groups of children to be taught by teachers	1	2	3	4	5
13.	The schedule of student activities with units	1	2	3	4	5
14.	The instructional time to be spent on each curriculum area	1	2	3	4	5
15.	The selection of instructional materials to be purchased	1	2	3	4	5
16.	The timetable to be followed in implementing curriculum innovations	1	2	3	4	5
17.	The daily schedule of a unit	1	2	3	4	5
		Very Little	Little	Some	Much	Very Much

APPENDIX C

FIRST CUT DECISION INVOLVEMENT INSTRUMENT FORMAT

DECISION INVOLVEMENT ANALYSIS

Questions

Please answer the following questions in terms of your school or school system by placing the appropriate number of the response in the boxes provided for each decision item. Place only one answer in each box.

1. Which person or group is primarily responsible at the present time for making this decision?

2. Which person or group do you believe should be primarily responsible for making this decision?

Decision Item #2

The selection of unit leaders or block leaders

1. ☐

2. ☐

Responses for Questions 1 and 2

The person or group primarily responsible for making the decision:

1 - Board of Education
2 - Negotiating Teams
3 - Superintendent
4 - Asst. Superintendent (Business, Special Ed.)
5 - SPC (Systemwide Policy Comm.)
6 - Special Districtwide Comm.
7 - Principal or Asst. Principal
8 - Resource Person (Counselor, IMC Director, Reading Spc., etc.)
9 - IIC (Instructional Improvement Comm.)
10 - Unit Leader or Block Leader
11 - Unit or Block Members as a Group
12 - Individual Teacher
13 - Aide
14 - Student
15 - Other (Please explain

---

3. Whenever this decision is made, how often are you involved in:

   A) providing information pertinent to the decision
   B) developing possible alternatives?
   C) recommending an alternative?
   D) making the final decision?
   E) evaluating the decision?

3.

A) ☐
B) ☐
C) ☐
D) ☐
E) ☐

4. Whenever this decision is made, how often do you believe you should be involved in:

   A) providing information pertinent to the decision?
   B) developing possible alternatives?
   C) recommending an alternative
   D) making the final decision?
   E) evaluating the decision?

4.

A) ☐
B) ☐
C) ☐
D) ☐
E) ☐

Responses for Questions 3 and 4

The frequency of your involvement in each step of the decision-making process:

1 - Never
2 - Seldom
3 - Sometimes
4 - Often
5 - Always

APPENDIX D

FINAL VERSION DECISION INVOLVEMENT ANALYSIS INSTRUMENT
DIRECTIONS AND FORMAT

DECISION INVOLVEMENT ANALYSIS

You are participating in a study being conducted by the Wisconsin Research and Development Center for Cognitive Learning. The purpose of this study is to determine the nature of teacher involvement in the decision-making process in IGE Multiunit Elementary Schools.

This instrument consists of 30 decision items about which questions are asked. Completion of the entire instrument should require less than twenty minutes of your time. All responses will remain confidential and none will be identified by person, school, or school district.

Please answer the four questions asked about each decision item by placing your responses in the spaces provided. A sample item, which has been marked, is provided for your convenience. Upon completing the instrument, please place it in the envelope, seal it, and give it to your principal who will return the instruments to us.

Your participation in this study is sincerely appreciated.

Published by The Wisconsin Research and Development Center for Cognitive Learning, supported in part as a research and development center by funds from the National Institute of Education, Department of Health, Education and Welfare. The opinions expressed herein do not necessarily reflect the position of the National Institute of Education and no official endorsement by the National Institute of Education should be inferred.

DECISION INVOLVEMENT ANALYSIS

Questions

Please answer the following four questions in terms of your school by placing the appropriate number of the response in the boxes provided for each decision item. The responses are listed in the right hand column of this sheet. Place only one answer in each box.

1. Which person or group presently makes the final decision on this item?

2. Which person or group should make the final decision on this item?

Sample Item

The allocation of materials, equipment, and supplies to units within a school

1. ☐

2. ☐

Use the Following Numbers to Respond to Questions 1 and 2.

1 - Board of Education
2 - Superintendent or Other Central Office Personnel
3 - Negotiation Teams
4 - Systemwide Program (Policy) Committee (SPC)
5 - Principal or Assistant Principal
6 - Entire Faculty as a Group
7 - Instructional Improvement Committee (IIC)
8 - Unit Leader
9 - Unit Teachers as a Group (I & R Uni
10 - Individual Teacher
11 - Parents or Parent Advisory Committe
12 - Student
13 - No One Presently Responsible

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3. How much involvement do teachers presently have in the decision-making process concerning this item?

4. How much involvement should teachers have in the decision-making process concerning this item?

3. ☐

4. ☐

Use the Following Numbers to Respond to Questions 3 and 4.

1 - Very little involvement

2 - Little involvement

3 - Some involvement

4 - Much involvement

5 - Very much involvement

APPENDIX E

FINAL VERSION DECISION INVOLVEMENT ANALYSES DECISION CONTENT ITEMS

SCALE	ITEM
EXTRA-SCHOOL	2: The amount of money designated for implementation of new programs within the school
	7: The selection of new teachers for the school
	11: The relationship of art, music and physical education to the instructional program
	15: The procedures to be utilized in evaluating a principal's performance
	19: The procedures to be utilized in evaluating a teacher's performance
	21: The criteria to be utilized in evaluating preservice and inservice programs
	22: The nature and extent of consultant help from outside the school
	23: The transfer of teachers from one unit to another unit within the school
	24: The topics for the inservice program
	27: The amount and nature of supervision of teaching methods
	28: The budget for the school
	29: The extent of involvement of parent advisory groups in the programs of the school
	30: The selection of unit leaders

SCALE	ITEM
SCHOOLWIDE	1: The approval of instructional materials to be purchased
	3: The nature and duration of specific instructional activities
	4: The coordination of curriculum across units within a school
	5: The amount of planning time provided unit leaders for unit-related activities
	6: The procedures to be utilized in evaluating instructional materials within a school
	9: The methods used to modify student conduct
	10: The criteria to be utilized in evaluating instructional programs within the school
	12: The number and nature of parent-teacher conferences
	13: The criteria to be utilized in evaluating the effectiveness of IGE within a school
	14: The changes to be made in the school-wide organizational pattern

SCALE	ITEM
UNIT-SUBUNIT	8: The duties and responsibilities of members in a unit
	16: The groupings to be utilized for instruction (one-to-one, small groups, etc.)
	17: The procedures to be utilized in pre-assessing an individual student's level of achievement, learning style, and level of motivation
	18: The design and content of the curriculum within a unit
	20: The curricular area to be individualized first, second, etc.
	25: The area(s) in which unit teachers should specialize
	26: The specific instructional objectives each child is to attain

APPENDIX F

CORRESPONDENCE WITH PILOT SAMPLE SCHOOLS AND FINAL STUDY SAMPLE SCHOOLS

the
Wisconsin
Research and Development Center
for Cognitive
Learning

the University of Wisconsin · 1025 West Johnson Street · Madison, Wisconsin 53706 (608)262-4901

May 15, 1974

Thank you for participating in the pilot test of the Decision Involvement Analysis Instrument. Enclosed is a copy of the final instrument which is presently being completed by nearly 2,000 teachers and unit leaders in over 90 IGE schools around the nation. Once the data has been analyzed, I'll send you an abstract of the findings.

Once again, thanks for suffering through all of the interviewing and pilot testing. Hopefully, your effort will significantly benefit IGE schools' operations and the R and D Center's understanding of teachers' involvement in the schools.

Have a good end-of-the-school-year and a good summer. Call if you ever need assistance.

Sincerely,

Kenneth W. Wright
Research Assistant
R-3 Component

KWW:ad

Enc.

the
Wisconsin
Research and Development Center
for Cognitive
Learning

the University of Wisconsin · 1025 West Johnson Street · Madison, Wisconsin 53706 · (608)262 - 4901

April 10, 1974

Thank you for agreeing to participate in the study of the relationship between teachers' involvement in decision making and I and R unit effectiveness. As was explained over the telephone, this is a follow-up study of the research conducted by Nancy Evers on I and R unit effectiveness. We sincerely appreciate your willingness to take the extra time to help in the research effort.

In order to provide you with some feedback from research, I have enclosed a summary of the completed and ongoing research of our component. If you need more information or other assistance, feel free to call me at 608/263-4270 (collect) or write. I'll be glad to help you or put you in touch with someone who can.

The Decision Involvement Analysis Instrument will be mailed to you during the week of April 15-19. A complete set of instructions will be included. Presently, I expect to report a summary of the results by August, 1974, in letter form to all the participating schools. The final technical paper may not be published until the spring of 1975.

Thanks again for all of your cooperation.

Sincerely,

Kenneth W. Wright
Research Assistant
R-3 Component

KWW:pp
Enc.

the
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Kenneth W. Wright
Research Assistant
R-3 Component

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Enc.

the
Wisconsin
Research and Development Center
for Cognitive
Learning

the University of Wisconsin · 1025 West Johnson Street · Madison, Wisconsin 53706 · (608)262 - 4901

Thank you for participating in the R and D Center's study on teacher involvement in decision-making in IGE schools. Your responses have been received and are being prepared for computer analysis. Once the results have been analyzed, you will receive an abstract of the findings. The final technical report probably will not be published until spring or summer of 1975. You will receive a copy when it is ready.

If you ever need assistance from our component of the R and D Center, feel free to write or call. Thanks again for your help.

Sincerely,

Kenneth W. Wright
Research Assistant
R-3 Component
608/263-4270

KWW:ad

APPENDIX G

I AND R UNIT OPERATIONS QUESTIONNAIRE

I AND R UNIT OPERATIONS QUESTIONNAIRE

DIRECTIONS: The following items are based upon the performance objectives identified by the Wisconsin R and D Center as being the responsibility of the I and R unit. Please indicate how effectively your unit achieves these objectives by circling the response which most accurately describes, in your opinion, the operations of your unit.

VE = Very effectively
E = Effectively
SE = Somewhat effectively
I = Ineffectively
VI = Very ineffectively

A. Instructional Program

Our I and R unit, in the curricular area(s) to which we are applying the Instructional Programming Model:

1. Develops and/or selects outlines of skills and concepts to be learned which are appropriate to the student in the unit. VE E SE I VI

2. Develops and/or selects behavioral objectives related to the skill and concept outlines. VE E SE I VI

3. Specifies materials, equipment, personnel, space and time needed for instruction. VE E SE I VI

4. Uses a variety of materials for each of the identified instructional objectives. VE E SE I VI

5. Specifies teacher activities needed for instruction. VE E SE I VI

6. Preassesses students for attainment of the objectives within the first month of implementing the Instructional Programming Model. VE E SE I VI

7. Preassesses students' motivational level, learning style, interest and attitudes, and special problems as soon after the preassessment of objectives attainment as the unit staff can conduct the assessment and utilize the results. VE E SE I VI

8. Places students in initial groups in IGE curriculum areas based on preassessment results regarding achievement, learning style, motivational level, interest, or other relevant variable(s). VE E SE I VI

VE = Very effectively
E = Effectively
SE = Somewhat effectively
I = Ineffectively
VI = Very ineffectively

9. Uses a variety of student grouping patterns in the course of a particular curriculum such as a) independent study, b) one-to-one (teacher-student), c) one-to-one (student-student), d) small group (3-11 students), e) medium group (12-19 students), f) class-sized group (20-39 students), and g) large group (more than 30 students).
VE E SE I VI

10. Assesses students for attainment of objectives after instruction.
VE E SE I VI

11. Records assessment results in a usable form (e.g., on charts, McBee cards, lists, or individual folders).
VE E SE I VI

12. Conducts evaluation regarding the percentage of students who attain specific objectives.
VE E SE I VI

13. Regroups students at least every two to three weeks based on needs and attainment of objectives.
VE E SE I VI

14. Plans for all I and R unit teachers to teach in the IGE subject-matter areas.
VE E SE I VI

15. Conducts evaluation regarding the effectiveness of the instructional materials currently in use.
VE E SE I VI

16. Conducts evaluation regarding the effectiveness of the instructional techniques currently in use.
VE E SE I VI

17. Conducts evaluation regarding the effectiveness of the assessment materials currently in use.
VE E SE I VI

18. Conducts evaluation regarding the effectiveness of the assessment techniques currently in use.
VE E SE I VI

B. Staff Development

Our I and R unit:

19. Participates in the school's staff development program as planned by the IIC.
VE E SE I VI

20. Participates in the evaluation of the school's staff development plan.
VE E SE I VI

VE = Very effectively
E = Effectively
SE = Somewhat effectively
I = Ineffectively
VI = Very effectively

VE E SE I VI 21. Participates in the evaluation of the intern-student teacher program.

22. Meets together for at least three days prior to the opening of school:

VE E SE I VI a. to make immediate plans regarding student grouping patterns and scheduling for the first one to two weeks of school.

VE E SE I VI b. to make long-range plans regarding our I and R unit's instructional design and goals for the entire year.

VE E SE I VI 23. Meets at least one day per semester when children are not at school to extend IGE planning into other curricular areas.

C. Organizational Operations

Our I and R unit:

VE E SE I VI 24. Schedules unit meetings regularly.

VE E SE I VI 25. Schedules at least two hours per week with one hour in a single block to plan for instruction.

VE E SE I VI 26. Holds unit meetings during the regular staff working day.

VE E SE I VI 27. Requires the unit leader, unit teachers, interns, and student teachers assigned to the unit to attend unit meetings.

VE E SE I VI 28. Prepares and distributes an agenda to all personnel involved in the meeting prior to unit meeting time.

VE E SE I VI 29. Has its unit meetings chaired by the unit leader.

VE E SE I VI 30. Focuses discussion on agenda topics at unit meetings.

VE E SE I VI 31. Has consultants, teachers, IMC director (librarian), aides, and others attend unit meetings at our request.

VE E SE I VI 32. Keeps minutes of unit meetings.

VE = Very effectively
E = Effectively
SE = Somewhat effectively
I = Ineffectively
VI = Very ineffectively

VE E SE I VI 33. Distributes minutes of unit meetings to total unit staff, the IIC, and others who attend unit meetings.

VE E SE I VI 34. Holds goal-setting meetings at least once per semester.

VE E SE I VI 35. Holds curriculum design meetings at least once per quarter.

VE E SE I VI 36. Holds meetings to evaluate instructional units, programs, and unit operations at least once per quarter.

VE E SE I VI 37. Holds grouping and scheduling meetings at least once every two weeks.

VE E SE I VI 38. Holds meetings whenever necessary to deal with immediate problems.

VE E SE I VI 39. Evaluates the flexibility of the schedule at least once per quarter.

VE E SE I VI 40. Assesses each unit member's expertise in subject matter at least once per year.

VE E SE I VI 41. Assesses each unit member's expertise in instructing various sizes and kinds of groups at least once per year.

VE E SE I VI 42. Provides at least five hours per week released time from instruction for the unit leader to plan, manage, study and conduct research.

VE E SE I VI 43. Provides at least one hour per week released time from instruction for teachers to plan, study, and conduct research.

VE E SE I VI 44. Assigns aides (instructional and clerical) tasks according to broad guidelines established by the IIC and/or specific guidelines established by the unit.

VE E SE I VI 45. Assigns each teacher a specialization in a curriculum area, or teaching styles to develop, so that he can act as a resource person to the unit.

VE E SE I VI 46. Identifies each student in the unit with a teacher who monitors his progress during the year and takes initiative as required in the IGE subject-matter areas.

VE = Very effectively
E = Effectively
SE = Somewhat effectively
I = Ineffectively
VI = Very ineffectively

D. School-Community Relations

Our I and R unit:

47. Identifies each student with a staff member for purposes of home-school relations, including conferences and home visits, as well as day-to-day guidance of the student and
VE E SE I VI monitoring of his performance.

VE E SE I VI 48. Reports individual students' progress to parents.

49. Cooperates with the IIC in interpreting the IGE/MUS-E concept to parents and residents in the school attendance
VE E SE I VI area.

50. Cooperates with the IIC in utilizing volunteer community personnel (e.g., parents, other adults, high school and college students, and people with special expertise) in
VE E SE I VI the instructional program and other school activities.

National Evaluation Committee

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Emeritus Professor
University of Chicago

Helen Bain
Past President
National Education Association

Lyle Bourne
Professor
University of Colorado

Sue Buel
National Evaluation Committee

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